

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:13:49 ON 26 NOV 2008  
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STRUCTURE FILE UPDATES: 24 NOV 2008 HIGHEST RN 1075293-66-1  
DICTIONARY FILE UPDATES: 24 NOV 2008 HIGHEST RN 1075293-66-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

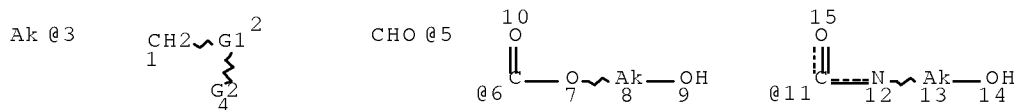
Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que stat 125

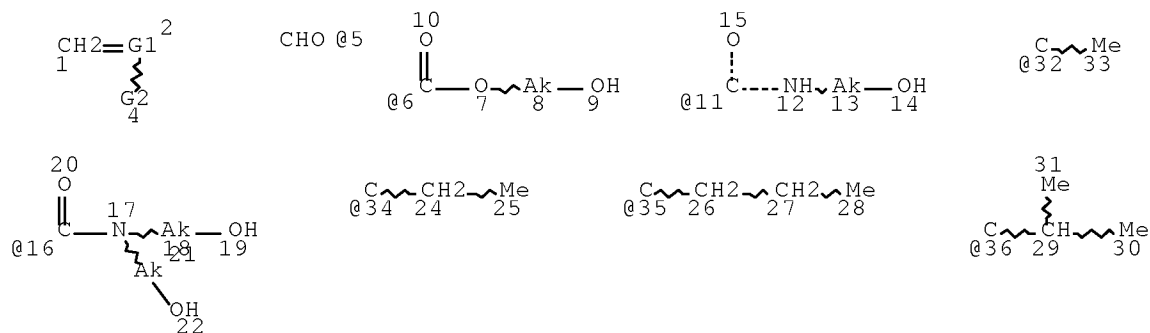
L4 SCR 2043  
L8 STR



VAR G1=CH/3  
VAR G2=5/6/11  
NODE ATTRIBUTES:  
CONNECT IS E2 RC AT 8  
CONNECT IS E2 RC AT 13  
DEFAULT MLEVEL IS ATOM  
GGCAT IS SAT AT 3  
GGCAT IS SAT AT 8  
GGCAT IS SAT AT 13  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M2-X4 C AT 3

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE  
L11 SCR 2016 OR 2026 OR 2021  
L13 63135 SEA FILE=REGISTRY SSS FUL L8 AND L4 NOT L11  
L19 STR



VAR G1=CH/32/34/35/36

VAR G2=5/6/11/16

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8

CONNECT IS E2 RC AT 13

CONNECT IS E2 RC AT 18

CONNECT IS E2 RC AT 21

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 8

GGCAT IS SAT AT 13

GGCAT IS SAT AT 18

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GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

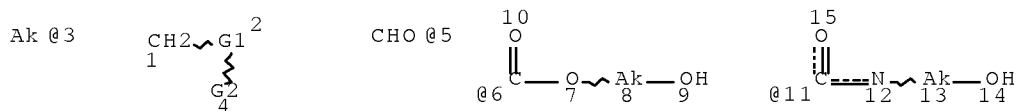
L21 57247 SEA FILE=REGISTRY SUB=L13 SSS FUL L19

L25 181 SEA FILE=REGISTRY ABB=ON PLU=ON L21 NOT NC>=2

=> d que stat 129

L4 SCR 2043

L8 STR



VAR G1=CH/3

VAR G2=5/6/11

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8

CONNECT IS E2 RC AT 13

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 3

GGCAT IS SAT AT 8

GGCAT IS SAT AT 13

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2-X4 C AT 3

November 26, 2008

10/577,255

3

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

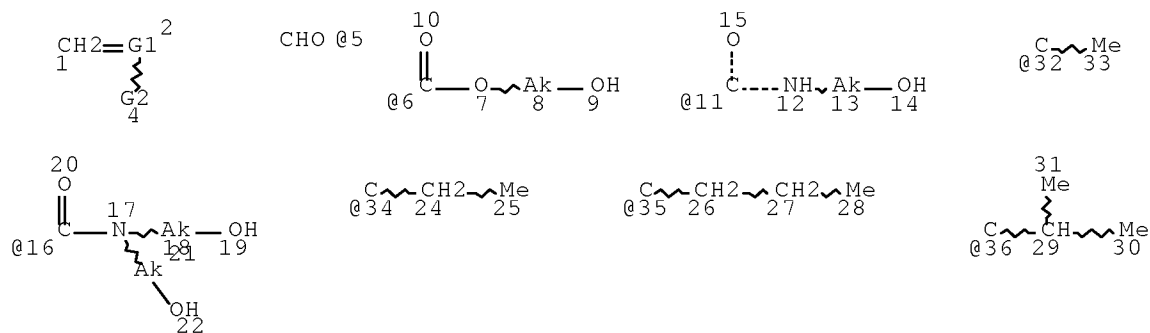
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L11 SCR 2016 OR 2026 OR 2021

L13 63135 SEA FILE=REGISTRY SSS FUL L8 AND L4 NOT L11

L19 STR



VAR G1=CH/32/34/35/36

VAR G2=5/6/11/16

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8

CONNECT IS E2 RC AT 13

CONNECT IS E2 RC AT 18

CONNECT IS E2 RC AT 21

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 8

GGCAT IS SAT AT 13

GGCAT IS SAT AT 18

GGCAT IS SAT AT 21

DEFAULT ECLEVEL IS LIMITED

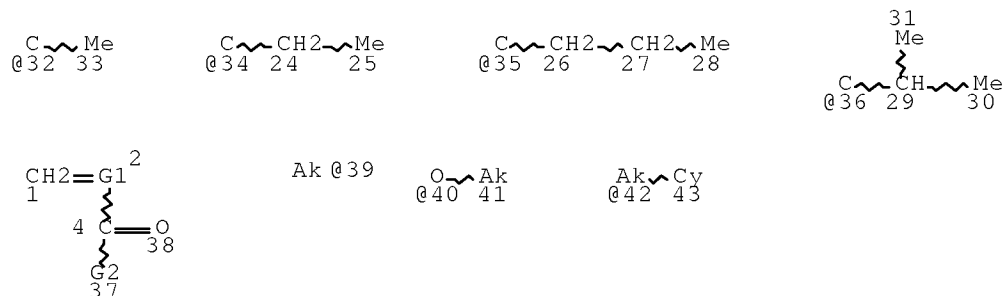
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NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L26 STR



VAR G1=CH/32/34/35/36

VAR G2=39/40/42

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 39

November 26, 2008

10/577,255

4

CONNECT IS E1 RC AT 41  
CONNECT IS E2 RC AT 42  
DEFAULT MLEVEL IS ATOM  
GGCAT IS SAT AT 39  
GGCAT IS SAT AT 41  
GGCAT IS SAT AT 42  
GGCAT IS UNS AT 43  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

L28 34226 SEA FILE=REGISTRY SUB=L13 SSS FUL L26 AND L19  
L29 338 SEA FILE=REGISTRY ABB=ON PLU=ON L28 NOT NC>=3

=> d his nofile

(FILE 'HOME' ENTERED AT 11:03:54 ON 26 NOV 2008)

FILE 'HCAPLUS' ENTERED AT 11:04:26 ON 26 NOV 2008

L1 1 SEA ABB=ON PLU=ON US20070081048/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 11:05:04 ON 26 NOV 2008

L2 5 SEA ABB=ON PLU=ON (25086-15-1/BI OR 26355-01-1/BI OR  
3089-11-0/BI OR 643090-86-2/BI OR 911204-98-3/BI)  
D SCA

FILE 'LREGISTRY' ENTERED AT 11:40:57 ON 26 NOV 2008

L3 STR

FILE 'REGISTRY' ENTERED AT 11:51:30 ON 26 NOV 2008

L4 SCR 2043

L5 50 SEA SSS SAM L3 AND L4

FILE 'STNGUIDE' ENTERED AT 11:59:16 ON 26 NOV 2008

FILE 'REGISTRY' ENTERED AT 12:06:11 ON 26 NOV 2008

L6 SCR 2077

L7 15 SEA SSS SAM L3 AND L4 NOT L6

L8 STR L3

L9 50 SEA SSS SAM L8 AND L4

L10 29 SEA SSS SAM L8 AND L4 NOT L6

L11 SCR 2016 OR 2026 OR 2021

L12 50 SEA SSS SAM L8 AND L4 NOT L11

L13 63135 SEA SSS FUL L8 AND L4 NOT L11

L14 1 SEA ABB=ON PLU=ON L2 AND L13  
SAV TEMP L13 EOF255/A

FILE 'LREGISTRY' ENTERED AT 12:17:37 ON 26 NOV 2008

L15 STR L8

FILE 'REGISTRY' ENTERED AT 12:25:06 ON 26 NOV 2008

L16 50 SEA SUB=L13 SSS SAM L15

FILE 'LREGISTRY' ENTERED AT 12:27:12 ON 26 NOV 2008

L17 STR L15

FILE 'REGISTRY' ENTERED AT 12:30:08 ON 26 NOV 2008  
L18 50 SEA SUB=L13 SSS SAM L17

FILE 'LREGISTRY' ENTERED AT 12:34:31 ON 26 NOV 2008  
L19 STR L17

FILE 'REGISTRY' ENTERED AT 12:37:19 ON 26 NOV 2008  
L20 50 SEA SUB=L13 SSS SAM L19  
L21 57247 SEA SUB=L13 SSS FUL L19  
L22 1 SEA ABB=ON PLU=ON L2 AND L21  
SAV L21 EOF255S1/A  
L23 4423 SEA ABB=ON PLU=ON L21 NOT NC>=3  
L24 57247 SEA ABB=ON PLU=ON L21 NOT RC>=2  
L25 181 SEA ABB=ON PLU=ON L21 NOT NC>=2

FILE 'LREGISTRY' ENTERED AT 12:49:42 ON 26 NOV 2008  
L26 STR L19

FILE 'REGISTRY' ENTERED AT 12:56:48 ON 26 NOV 2008  
L27 50 SEA SUB=L13 SSS SAM L26 AND L19  
L28 34226 SEA SUB=L13 SSS FUL L26 AND L19  
SAV L28 EOF255S2/A  
L29 338 SEA ABB=ON PLU=ON L28 NOT NC>=3  
L30 1 SEA ABB=ON PLU=ON L29 AND L2  
D RN  
L31 519 SEA ABB=ON PLU=ON L25 OR L29

FILE 'HCAPLUS' ENTERED AT 13:03:11 ON 26 NOV 2008  
L32 QUE ABB=ON PLU=ON (PHOTO OR LIGHT) (A) SENS? OR PHOTOSENS  
? OR LIGHTSENS? OR PHOTOACTIVE? OR PHOTOREACTIV? OR  
LITHO? OR PHOTOLITHO?  
L33 313 SEA ABB=ON PLU=ON L31(L) L32  
L34 1037 SEA ABB=ON PLU=ON L30  
L35 60 SEA ABB=ON PLU=ON L33 AND L34  
L36 58 SEA ABB=ON PLU=ON L35 AND (PY<=2005 OR PRY<=2005 OR  
AY<=2005)  
L37 QUE ABB=ON PLU=ON COMPOSITION  
L38 18 SEA ABB=ON PLU=ON L36 AND L37  
L39 141 SEA ABB=ON PLU=ON L33 AND L37  
L40 QUE ABB=ON PLU=ON COMPOSITION/TI  
L41 85 SEA ABB=ON PLU=ON L39 AND L40  
L42 282 SEA ABB=ON PLU=ON L33 AND (PY<=2005 OR PRY<=2005 OR  
AY<=2005)  
L43 75 SEA ABB=ON PLU=ON L41 AND L42  
L44 63 SEA ABB=ON PLU=ON L43 NOT L38  
L45 1160 SEA ABB=ON PLU=ON L31(L) L37  
L46 58 SEA ABB=ON PLU=ON L44 AND L45  
L47 20415 SEA ABB=ON PLU=ON L32(3A) L37  
L48 58 SEA ABB=ON PLU=ON L46 AND L47

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 13:14:00 ON 26 NOV 2008  
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FILE COVERS 1907 - 26 Nov 2008 VOL 149 ISS 22  
FILE LAST UPDATED: 25 Nov 2008 (20081125/ED)

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d ibib abs hitstr hitind l38 1-18

L38 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2006:13571 HCAPLUS Full-text  
DOCUMENT NUMBER: 144:117832  
TITLE: Photosensitive resin composition for  
ink jet printer head  
INVENTOR(S): Ishikura, Hiroe; Shiba, Shoji; Okano, Akihiko  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: PCT Int. Appl., 61 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006001515	A1	20060105	WO 2005-JP12160	200506 24
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006011182	A	20060112	JP 2004-190484	200406 28

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November 26, 2008

10/577,255

7

EP 1763705	A1	20070321	EP 2005-780110	200506 24
<--				
R: DE, FR, GB, IT CN 1977217	A	20070606	CN 2005-80021432	200506 24
<--				
US 20070081048	A1	20070412	US 2006-577255	200604 26
<--				
KR 2007043805	A	20070425	KR 2007-701946	200701 26
<--				
PRIORITY APPLN. INFO.:			JP 2004-190484	A 200406 28
<--				
			WO 2005-JP12160	W 200506 24
<--				

AB A pos. type photosensitive resin composition comprises a polyacrylate resin having, in the structure, at least a structural unit represented by (CH<sub>2</sub>CR<sub>1</sub>C(=O)X)<sub>n</sub>-(CH<sub>2</sub>R<sub>2</sub>CC(=O)R<sub>3</sub>)<sub>m</sub> (X = hydroxyl group, C2-4 alkynol group, methylol-amino group; R<sub>1</sub> and R<sub>2</sub> = H, C1-3 alkyl group; R<sub>3</sub> = C1-3 alkyl group, C1-3 alkoxy group, aralkyl group having an aryl group or C1-2 alkyl group; n = pos. integer; and m = 0 or a pos. integer, and a condensable crosslinker).

IT 26355-01-1DP, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer, reaction product with penta methoxy melamine  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photosensitive resin composition for ink jet printer head containing)

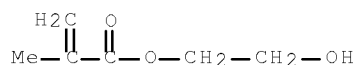
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

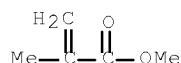
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-039  
ICS B41J002-16  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
ST photosensitive resin compn ink jet head process manuf  
IT Ink-jet printer heads  
Light-sensitive materials  
(photosensitive resin composition for ink jet printer head)  
IT 3089-11-ODP, Hexamethoxymethyl melamine, reaction product with  
methacrylate copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(Nikalac MW-100L; photosensitive resin composition for ink  
jet printer head containing)  
IT 911204-98-3, SP 172  
RL: CAT (Catalyst use); USES (Uses)  
(photosensitive resin composition for ink jet printer head  
containing)  
IT 25086-15-1DP, Methacrylic acid-methyl methacrylate copolymer,  
reaction product with Hexamethoxymethyl melamine  
26355-01-1DP, 2-Hydroxyethyl methacrylate-methyl  
methacrylate copolymer, reaction product with penta methoxy melamine  
643090-86-2DP, Nikalac MX 750LM, reaction product with methacrylate  
copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(photosensitive resin composition for ink jet  
printer head containing)  
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L38 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:689951 HCAPLUS Full-text  
DOCUMENT NUMBER: 137:224124  
TITLE: Light-sensitive solder resin composition  
containing specific prepolymer used for  
manufacturing electric parts as solder resist  
and dielectric film  
INVENTOR(S): Kusaka, Akira  
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002258477	A	20020911	JP 2001-58227	20010302



PRIORITY APPLN. INFO.:

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JP 2001-58227200103  
02

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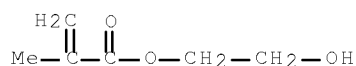
AB The title composition contains a prepolymer, a photopolymn. initiator, a diluent reactive towards the prepolymer, epoxides, and compds. having OH groups, wherein the prepolymer has a polymerizable unsatd. group and a carboxy group. The composition shows the good developing characteristics, the good curing property, and the good contact with a substrate.

IT 26355-01-1P, Methyl methacrylate/2-hydroxyethyl methacrylate copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(compound having OH group in light-sensitive solder resin composition)

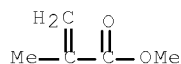
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9  
CMF C6 H10 O3

CM 2

CRN 80-62-6  
CMF C5 H8 O2

IC ICM G03F007-027  
ICS G03F007-027; C08F002-50; C08F290-00; C08L029-04; C08L063-00;  
C08L063-10; C08L101-02; G03F007-004; G03F007-028; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 76

ST light sensitive solder resin compn elec resist dielec film

IT Polyvinyl butyrals  
RL: TEM (Technical or engineered material use); USES (Uses)  
(S-Lec BX-L; compound containing OH group in light-sensitive solder resin composition)

IT Polyvinyl acetals  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acetoacetals, S-Lec KS 10; compound containing OH group in light-sensitive solder resin composition)

IT Electric insulators  
Light-sensitive materials

(light-sensitive solder resin composition used for manufacturing elec. parts as solder resist, dielec. film)

IT Solder resists  
(photoresists; light-sensitive solder resin composition used for manufacturing elec. parts as solder resist, dielec. film)

IT Photoresists  
(solder; light-sensitive solder resin composition used for manufacturing elec. parts as solder resist, dielec. film)

IT 71868-10-5, Irgacure 907  
RL: CAT (Catalyst use); USES (Uses)  
(compound having OH group in light-sensitive solder resin composition)

IT 26355-01-1P, Methyl methacrylate/2-hydroxyethyl methacrylate copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(compound having OH group in light-sensitive solder resin composition)

IT 29570-58-9, Dipentaerythritol hexaacrylate 251471-86-0, Epikote 180S80  
RL: TEM (Technical or engineered material use); USES (Uses)  
(diluent in light-sensitive solder resin composition)

IT 289478-37-1P, Epikote 180S80/acrylic acid/tetrahydrophthalic anhydride copolymer 303006-52-2P, Epikote 157S70-acrylic acid-tetrahydrophthalic anhydride copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepolymer for light-sensitive solder resin composition)

L38 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:796430 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:350553  
TITLE: Photosensitive polymer compositions  
for formation of solder resist layers and  
electric insulating layers  
INVENTOR(S): Kusaka, Akira; Hata, Kazuyuki; Soejima, Hiroshi  
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001305726	A	20011102	JP 2001-30391	20010207

PRIORITY APPLN. INFO.: JP 2000-39030 A 20000217

AB The composition mainly consists of (A) a prepolymer having polymerizable unsatd. group and carboxyl group in a mol., (B) a photopolymerization initiator, (C) a reactive diluent which is polymerizable with the prepolymer A, (D) a blocked isocyanate having  $\geq 2$  blocked isocyanate group(s) in a mol., and (E) a

tackifier. Hardened products of the compns. and printed circuit boards having layers of the hardened products are also claimed.

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(tackifier; photosensitive polymer compns.

for solder resists and insulating layers in electronic devices)

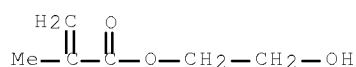
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

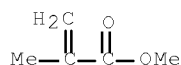
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-004

ICS C08G018-80; C08G059-14; G03F007-027; G03F007-085; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST elec insulator photosensitive polymer compn; solder resist layer photosensitive polymer compn; photosensitive polymer printed circuit board

IT Polyvinyl butyrals

RL: TEM (Technical or engineered material use); USES (Uses)  
(S-Lec BX-L, tackifier; photosensitive polymer compns.

for solder resists and insulating layers in electronic devices)

IT Polyvinyl acetals

RL: TEM (Technical or engineered material use); USES (Uses)  
(acetoacetals, S-Lec KS 10, tackifier; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)

IT Epoxy resins, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)

IT Polymerization catalysts

(photopolymn.; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)

IT Tackifiers

- (photosensitive polymer compns. containing; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT Electric insulators  
Printed circuit boards  
Solder resists  
(photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT Polyisocyanurates  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reaction products with  $\epsilon$ -caprolactam or ethylhexanol; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT 71868-10-5, Irgacure 907  
RL: CAT (Catalyst use); USES (Uses)  
(photopolymn. initiator; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT 104-76-7DP, 2-Ethylhexanol, reaction products with polyisocyanurates  
105-60-2DP,  $\epsilon$ -Caprolactam, reaction products with polyisocyanurates 31370-61-3DP, 2,4-Tolylene diisocyanate-2,6-tolylene diisocyanate copolymer, reaction products with  $\epsilon$ -caprolactam or ethylhexanol 289478-37-1P, Acrylic acid-Epikote 180S80-tetrahydrophthalic acid anhydride copolymer 303006-52-2P, Acrylic acid-Epikote 157S70-tetrahydrophthalic acid anhydride copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reactive diluent; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)
- IT 872-35-5, 2-Mercaptoimidazole 4420-74-0, 3-Mercaptopropyltrimethoxysilane 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer 371113-26-7, Rikaester 8LJA 371113-28-9, Rikatac PCJ  
RL: TEM (Technical or engineered material use); USES (Uses)  
(tackifier; photosensitive polymer compns. for solder resists and insulating layers in electronic devices)

L38 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:225512 HCAPLUS Full-text

DOCUMENT NUMBER: 134:273548

TITLE: Light-sensitive resin composition for dry film resist suitable for patterning with sand blast

INVENTOR(S): Sato, Hiroaki

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001083701

A

20010330

JP 1999-256520

199909

10

&lt;--

PRIORITY APPLN. INFO.:

JP 1999-256520

199909

10

&lt;--

AB The title resin composition consists of: a first urethane acrylate resin containing carboxylic groups; a photopolymn. initiator; and urethane acrylate resin of  
 R1-O-CONH-R2-NHCOO-R3-OCONH-R2-NHCOO-(X)<sub>n</sub>-R1 ( R1 = urethane residue containing ethylenic unsat. groups and a hydroxyl group; R2 = urethane bond residue of polyisocyanate; R3 = urethane bond residue of polyol; X = urethane bond residue of polyol or polyester polyol; n = 1-20 integer). The first urethane acrylate resin is prepared from: a urethane, which is prepared from a diol containing a carboxylic group, another diol of ≤500 average mol. weight without an acid value, and a polyisocyanate; and a compound having ethylenic unsat. groups and a hydroxyl group. The resin composition provides a resist of the excellent sand-blast resistance and the good resistance towards an alkali developer to generate the high resolution

IT 26355-01-1F, Methyl methacrylate-2-hydroxyethyl methacrylate copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic polymer in light-sensitive resin composition for dry film resist)

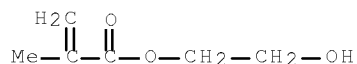
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

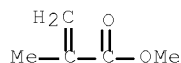
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-027

ICS C08F299-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and

Other Reprographic Processes)

ST light sensitive resin compn dry film resist sand blast

IT Polyurethanes, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylates; light-sensitive resin composition for dry film resist suitable for use with sand blast process)

IT Light-sensitive materials  
 Photoresists  
 Sandblasting  
 (light-sensitive resin composition for dry film resist suitable for use with sand blast process)

IT 25987-66-0P, Methyl methacrylate-butyl acrylate-methacrylic acid-styrene copolymer 26355-01-1P, Methyl methacrylate-2-hydroxyethyl methacrylate copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic polymer in light-sensitive resin composition for dry film resist)

IT 818-61-1DP, 2-Hydroxyethyl acrylate, reaction products with polyurethanes 24938-37-2DP, reaction products with 2-hydroxyethyl acrylate 25569-53-3DP, reaction products with 2-hydroxyethyl acrylate 56925-73-6P, Methyl methacrylate-butyl methacrylate-2-ethylhexyl acrylate-methacrylic acid copolymer 216377-58-1DP, reaction products with 2-hydroxyethyl acrylate 321415-66-1DP, reaction products with 2-hydroxyethyl acrylate 326480-46-0DP, reaction products with 2-hydroxyethyl acrylate 331745-54-1DP, reaction products with 2-hydroxyethyl acrylate  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (urethane acrylate resin in light-sensitive resin compn . for dry film resist)

L38 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:225511 HCAPLUS Full-text

DOCUMENT NUMBER: 134:273547

TITLE: Light-sensitive resin composition for dry film resist suitable for use with sand blast process

INVENTOR(S): Sato, Hiroaki

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001083699	A	20010330	JP 1999-256518	19990910
			<--	
PRIORITY APPLN. INFO.:			JP 1999-256518	19990910
			<--	

AB The title resin composition consists of: an urethane acrylate resin containing carboxylic groups; a photopolymn. initiator; and an acrylic polymer. The urethane acrylate resin is prepared from: a urethane, which is prepared from a diol containing a carboxylic group, another diol of  $\leq 500$  average mol. weight without an acid value, and a polyisocyanate; and a compound having ethylenic unsat. groups and a hydroxyl group. The acrylic polymer contains  $\geq 50$  % of monomers containing a hydroxy group and has  $\leq 50$  mg·KOH/g acid value. The resin composition provides a resist of the excellent sand-blast resistance for patterning with sand blast and also the good resistance towards an alkali developer to generate the high resolu pattern.

IT 26355-01-1P, Methyl methacrylate-2-hydroxyethyl methacrylate copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic polymer in light-sensitive resin composition for dry film resist)

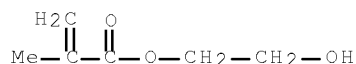
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

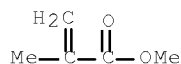
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-027

ICS G03F007-027; C08F002-44; C08F002-50; C08F299-06; C08L033-08; C08L075-16; G03F007-004; G03F007-028; G03F007-033

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST light sensitive resin compn dry film resist sand blast

IT Polyurethanes, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylates; light-sensitive resin composition for dry film resist suitable for use with sand blast process)

IT Light-sensitive materials

Photoresists

Sandblasting

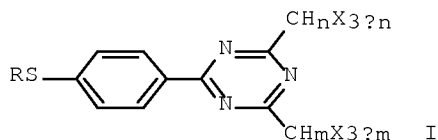
(light-sensitive resin composition for dry film resist suitable for use with sand blast process)

IT 26355-01-1P, Methyl methacrylate-2-hydroxyethyl methacrylate copolymer 35343-65-8P, Butyl acrylate-hydroxyethyl methacrylate-acrylic acid copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic polymer in light-sensitive resin composition for dry film resist)

IT 818-61-1DP, 2-Hydroxyethyl acrylate, reaction products with polyurethanes 326480-46-0DP, reaction products with 2-hydroxyethyl acrylate 331745-54-1DP, reaction products with 2-hydroxyethyl acrylate 331746-98-6DP, reaction products with 2-hydroxyethyl acrylate  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (urethane acrylate resin in light-sensitive resin composition for dry film resist)

L38 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:811792 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:102888  
 TITLE: Photosensitive color composition containing triazine-type photosensitive acid-generating agent and color filter using the composition  
 INVENTOR(S): Kita, Shinichi; Taguchi, Takao; Tamura, Akira  
 PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10333334	A	19981218	JP 1997-145393	19970603
			<--	
PRIORITY APPLN. INFO.:			JP 1997-145393	19970603
			<--	
OTHER SOURCE(S):			MARPAT 130:102888	
GI				



AB The composition for the color filter contains a resin having OH group crosslinkable with an acid, a crosslinking agent, a photosensitive acid-generating agent comprising a triazine derivative I (X = Br, Cl; m, n = 0-3; R



= alkyl, aryl) containing trihalomethyl group, and a pigment. The filter without loss of light transmission, comprising orderly tapered and highly precise patterns, is manufactured at a high yield by using the composition

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive composition containing hydroxy-containing crosslinkable resin and acid-generating triazines for heat-resistant color filters)

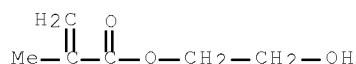
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

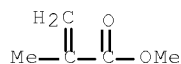
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-038

ICS C08K005-378; C08L101-06; G02B005-20; G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive compn color filter manuf; hydroxy contg crosslinkable resin color filter; acid generating trihalomethyl contg triazine compd; heat resistance color filter manuf

IT Aminoplasts

RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinking agents; photosensitive composition containing hydroxy-containing crosslinkable resin and acid-generating triazines for heat-resistant color filters)

IT Optical filters

Photoresists

(photosensitive composition containing hydroxy-containing crosslinkable resin and acid-generating triazines for heat-resistant color filters)

IT 9003-08-1, Nikalac MW 30M

RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinking agents; photosensitive composition containing hydroxy-containing crosslinkable resin and acid-generating triazines for heat-resistant color filters)

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer 117482-71-0

RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition containing hydroxy-containing  
 crosslinkable resin and acid-generating triazines for  
 heat-resistant color filters)

L38 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:794929 HCAPLUS Full-text

DOCUMENT NUMBER: 123:183494

ORIGINAL REFERENCE NO.: 123:32381a,32384a

TITLE: Color filter, method for manufacturing it, and  
 liquid crystal panel.

INVENTOR(S): Shiba, Shoji; Sato, Hiroshi; Shirota, Katsuhiko;  
 Yokoi, Hideto; Kashiwazaki, Akio; Murai,  
 Keiichi; Miyazaki, Takeshi

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Eur. Pat. Appl., 49 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 655647	A1	19950531	EP 1994-118432	199411 23
<--				
EP 655647	B1	20020227		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 08075916	A	19960322	JP 1994-286616	199411 21
<--				
JP 2872594	B2	19990317		
TW 417034	B	20010101	TW 1994-83110881	199411 22
<--				
EP 942326	A1	19990915	EP 1999-110503	199411 23
<--				
EP 942326	B1	20030611		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE				
EP 942327	A1	19990915	EP 1999-110504	199411 23
<--				
EP 942327	B1	20081029		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE				
AT 213845	T	20020315	AT 1994-118432	199411 23
<--				
AT 242889	T	20030615	AT 1999-110503	

				199411 23
JP 08075917	A	19960322	<-- JP 1994-289851	199411 24
JP 2872595 CN 1122007	B2 A	19990317 19960508	<-- CN 1994-114096	199411 24
CN 1082672 KR 173149	C B1	20020410 19990320	<-- KR 1994-31035	199411 24
JP 08136726	A	19960531	<-- JP 1994-299633	199412 02
JP 2872596 US 5716740	B2 A	19990317 19980210	<-- US 1996-695667	199608 08
US 6180294	B1	20010130	<-- US 1997-965466	199711 06
US 6686104	B1	20040203	<-- US 2000-679342	200010 04
PRIORITY APPLN. INFO.:			<-- JP 1993-293395	A 199311 24
			<-- JP 1993-322133	A 199312 21
			<-- JP 1994-150870	A 199407 01
			<-- JP 1994-150874	A 199407 01
			<-- JP 1994-220049	A 199409 14
			<-- US 1994-345710	B1 199411 22
			<-- EP 1994-118432	A3 199411

23

&lt;--

US 1996-695667

A3

199608

08

&lt;--

US 1997-965466

A3

199711

06

&lt;--

AB Provided is a color filter which comprises a substrate and a resin layer on the substrate, the resin layer containing a plurality of colored portions of different colors and noncolored portions. The colored portions are made by ink-printing, nonimpact, ink-jet printing.

IT 26355-01-1, Hydroxyethyl methacrylate-methyl methacrylate copolymer 28502-06-9, Methyl methacrylate-N-methylolacrylamide copolymer  
RL: MOA (Modifier or additive use); POF (Polymer in formulation);  
USES (Uses)  
(ink jet printing on photosensitive composition  
for color filter for liquid-crystal display panels)

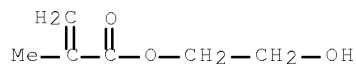
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

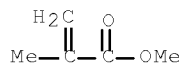
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



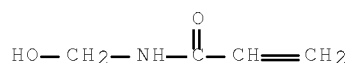
RN 28502-06-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N-(hydroxymethyl)-2-propenamide (CA INDEX NAME)

CM 1

CRN 924-42-5

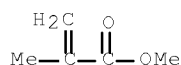
CMF C4 H7 N O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C007-12  
ICS G02F001-1335; B41M005-00

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST optical filter liq crystal display; photosensitive compo  
ink jet printing

IT Optical filters  
Photoimaging compositions and processes  
(ink jet printing on photosensitive composition for color  
filter for liquid-crystal display panels)

IT Optical imaging devices  
(electrooptical liquid-crystal, ink jet printing on photosensitive  
composition for color filter for liquid-crystal display panels)

IT Printing, nonimpact  
(ink-jet, ink jet printing on photosensitive composition for  
color filter for liquid-crystal display panels)

IT 140-95-4, Dimethylolurea 9003-08-1, Sumitex M3 9004-62-0, Ah-15  
9004-64-2, Hpc-h 9012-09-3, Cellulose triacetate  
26355-01-1, Hydroxyethyl methacrylate-methyl methacrylate  
copolymer 28502-06-9, Methyl  
methacrylate-N-methylolacrylamide copolymer 38193-53-2  
125026-29-1 129401-30-5 160109-42-2 167860-29-9 167860-30-2  
167860-31-3  
RL: MOA (Modifier or additive use); POF (Polymer in formulation);  
USES (Uses)  
(ink jet printing on photosensitive composition  
for color filter for liquid-crystal display panels)

L38 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:202127 HCAPLUS Full-text

DOCUMENT NUMBER: 118:202127

ORIGINAL REFERENCE NO.: 118:34537a,34540a

TITLE: Dyeing of waterless lithographic plate under  
ultrasonic wave

INVENTOR(S): Kojima, Noriyoshi; Nogami, Akira; Hirai,  
Katsura; Uehara, Masabumi

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04299354	A	19921022	JP 1991-89754	19910328

PRIORITY APPLN. INFO.: <-- JP 1991-89754 19910328

AB A presensitized waterless lithog. plate comprising, on a support, a primer layer, a photosensitive layer, and an ink-repellent layer is exposed, developed, and dyed under ultrasonic wave irradiation A presensitized waterless lithog. plate having an acrylic resin primer layer, an acrylic resin photosensitive layer, and a silicone rubber layer was exposed, developed, and dyed by using a solution containing Vitoria Pure Blue BOH under ultrasonic wave irradiation to show improved dyeability.

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer  
 RL: USES (Uses)  
 (primer layers containing, for presensitized waterless lithog . plates)

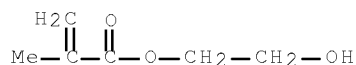
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

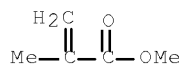
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-40

ICS G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 42

IT 126714-06-5 139724-08-6, Acrylic acid-2-hydroxyethyl methacrylate-N-(4-hydroxyphenyl)methacrylamide copolymer

RL: USES (Uses)

(photosensitive compns. containing, for preparing waterless

lithog. plates)  
IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate  
copolymer 65436-60-4 75577-71-8 77865-47-5  
RL: USES (Uses)  
(primer layers containing, for presensitized waterless lithog  
. plates)

L38 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1993:113210 HCAPLUS Full-text  
DOCUMENT NUMBER: 118:113210  
ORIGINAL REFERENCE NO.: 118:19565a,19568a  
TITLE: Waterless presensitized lithographic plates with  
photocured primer layer  
INVENTOR(S): Tomiyasu, Hiroshi; Kasakura, Akio; Goto, Sei;  
Suzuki, Norihito; Sasa, Nobumasa  
PATENT ASSIGNEE(S): Mitsubishi Kasei Corp., Japan; Konica Co.  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04190358	A	19920708	JP 1990-322180	199011 26

<--  
PRIORITY APPLN. INFO.: JP 1990-322180  
199011  
26

<--  
AB In the title plates prepared by forming a primer layer, a photosensitive  
layer, and a silicone rubber layer successively on a support, the primer layer  
contains  $\geq 2$  polymers having  $\geq 5^\circ$  difference in glass transition temperature  
(Tg) from each other, ethylenically unsatd. monomers or oligomers, and  
photopolymn. initiators and the layer is photo-cured before coating the  
photosensitive layer. The primer layer shows good photocurable property,  
scratch resistance, and adhesion to untreated Al support. Thus, an Al plate  
was coated with a composition containing 2-hydroxyethyl methacrylate (I)-Me  
methacrylate (II) (45:55) copolymer (Tg  $58^\circ$ ), I-II (34:66) copolymer (Tg  $48^\circ$ ),  
pentaerythritol triacrylate, DA-314 (triacrylate monomer), DETX (photopolymn.  
initiator), and EPA (photopolymn. initiator), photo-cured, and overcoated with  
a photosensitive layer containing a diazo resin and with a silicone rubber  
layer to give a waterless presensitized lithog. plate.

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate  
copolymer  
RL: USES (Uses)  
(waterless presensitized lithog. plate primer layer  
containing)

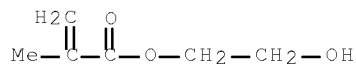
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

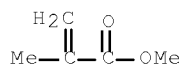
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-00

ICS G03F007-11

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 25951-39-7, Butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer 27012-37-9, Ethyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer 126465-54-1, UR 8300 145266-84-8, UR 8700 146162-80-3

RL: USES (Uses)

(waterless presensitized lithog. plate primer layer containing)

L38 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:30048 HCAPLUS Full-text

DOCUMENT NUMBER: 118:30048

ORIGINAL REFERENCE NO.: 118:5389a, 5392a

TITLE: Waterless lithographic original plates with photosensitive layer containing hydroxyl group-containing polymer and boron compound

INVENTOR(S): Tamura, Kazutaka; Mori, Yoichi

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04172456	A	19920619	JP 1990-301392	19901106

&lt;--

PRIORITY APPLN. INFO.:

JP 1990-301392

199011

06

&lt;--



AB The original plates are prepared by forming a silicone rubber layer and a photosensitive layer containing a polymer having OH groups in its side chain and an alkanoyloxyboron compound successively on a substrate. The plates can easily be developed and show good adhesion of the silicone rubber layer to the photosensitive layer and printing durability. Thus, a sprayed Al substrate was coated with a silicone rubber layer and with a composition containing Me methacrylate-2-hydroxyethyl methacrylate copolymer, phenyldiacetoxyboron, Aronix M 310 (photopolymerizable monomer), and photoinitiator to give a waterless presensitized lithog. plate.

IT 26355-01-1, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer  
 RL: USES (Uses)  
 (waterless presensitized lithog. plate  
 photosensitive layer containing)

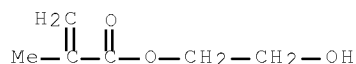
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

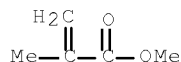
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-00  
 ICS G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 80-62-6D, copolymer with acrylic silicone 10193-99-4,  
 Pentaerythritol tetrakis(thioglycolate) 24979-70-2,  
 Poly(p-hydroxystyrene) 26355-01-1, 2-Hydroxyethyl  
 methacrylate-methyl methacrylate copolymer 100289-84-7, Aronix M  
 310 112534-55-1 145073-17-2 145073-18-3  
 RL: USES (Uses)  
 (waterless presensitized lithog. plate  
 photosensitive layer containing)

L38 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1988:446208 HCAPLUS Full-text

DOCUMENT NUMBER: 109:46208

ORIGINAL REFERENCE NO.: 109:7647a, 7650a

TITLE: Photosensitive resins having phenylenediacylate derivative type pendant groups

November 26, 2008

10/577,255

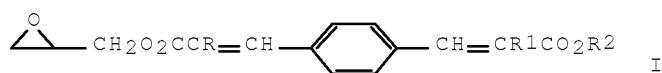
26

INVENTOR(S): Ichimura, Kunihiro; Nishio, Yoshihiro; Oe, Koji  
 PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology,  
 Japan; Dainippon Ink and Chemicals, Inc.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62215607	A	19870922	JP 1986-57106	198603 17
JP 07042330	B	19950510	JP 1986-57106	198603 17

PRIORITY APPLN. INFO.: <--

GI



AB The title photosensitive resins are prepared by reaction of pendant CO<sub>2</sub>H group-containing vinyl polymers with epoxy group-containing p-phenylenediacrylic acid diesters. Optionally, the OH groups on the above resins are reacted with acid anhydrides. The p-phenylenediacrylate esters are selected from I (R, R<sub>1</sub> = H, CN; R<sub>2</sub> = an organic moiety which does not react with CO<sub>2</sub>H or epoxy group). The photosensitive resins show high sensitivity and good storage stability and are useful in preparing presensitized plates.

IT 26355-01-1D, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer, esters with phthalic anhydride, glycidyl ethoxycarbonylvinylcinnamate, and acetic anhydride  
 RL: USES (Uses)

(photosensitive resin compns. containing, for  
 presensitized printing plates)

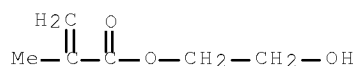
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

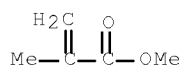
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08F008-14

ICS G03C001-71

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 37

IT Printing plates

(presensitized, photosensitive resin compns. for)

IT 67-56-1D, Methanol, esters with maleic anhydride- or itaconic anhydride-styrene copolymer, reaction products with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 67-56-1D, Methanol, esters with maleic anhydride-styrene copolymer, reaction products with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 85-44-9D, Phthalic anhydride, esters with poly(vinyl alc.) or hydroxyethyl methacrylate-Me methacrylate copolymer, reaction products with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 108-24-7D, Acetic anhydride, esters with glycidyl ethoxycarbonylvinylcinnamate-modified methacrylic acid-Bu methacrylate copolymer 574-93-6, Phthalocyanine 9002-89-5D, Poly(vinyl alcohol), esters with phthalic anhydride, glycidyl ethoxycarbonylvinylcinnamate, and acetic anhydride 9010-92-8D, Methacrylic acid-styrene copolymer, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 9011-13-6D, esters with methanol, glycidyl ethoxycarbonylvinylcinnamate, and acetic anhydride 25086-15-1D, Methacrylic acid-methyl methacrylate copolymer, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 25087-26-7D, Polymethacrylic acid, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 25213-61-0D, Monomethyl maleate-styrene copolymer, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 25215-60-5D, Monoethyl maleate-styrene copolymer, esters with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 25322-25-2D, Acrylic acid-methyl methacrylate copolymer, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 26284-14-0D, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 26355-01-1D, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer, esters with phthalic anhydride, glycidyl ethoxycarbonylvinylcinnamate, and acetic anhydride 26711-20-6D, Itaconic anhydride-styrene copolymer, esters with methanol, glycidyl ethoxycarbonylvinylcinnamate, and acetic anhydride 75361-25-0D, esters with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 87701-04-0D, esters with glycidyl ethoxycarbonylvinylcinnamates and acetic anhydride 103974-10-3D, esters with methacrylic acid copolymers and acetic anhydride 114975-31-4D, esters with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 114975-32-5D, esters with glycidyl ethoxycarbonylvinylcinnamate and acetic anhydride 114975-33-6D, esters with glycidyl

ethoxycarbonylvinylcinnamates and acetic anhydride 115127-93-0D,  
 esters with methacrylic acid copolymers and acetic anhydride  
 115127-94-1D, esters with methacrylic acid copolymers and acetic  
 anhydride 115127-95-2 115394-93-9D, esters with glycidyl  
 ethoxycarbonylvinylcinnamate and acetic anhydride  
 RL: USES (Uses)

(photosensitive resin compns. containing, for  
 presensitized printing plates)

L38 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:449566 HCAPLUS Full-text

DOCUMENT NUMBER: 107:49566

ORIGINAL REFERENCE NO.: 107:8087a,8090a

TITLE: Photosensitive polymer compositions

INVENTOR(S): Fujii, Kenichi; Goto, Yoshitaka; Yazawa,  
 Toshiya; Yamada, Eiichi

PATENT ASSIGNEE(S): Nippon Oils & Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

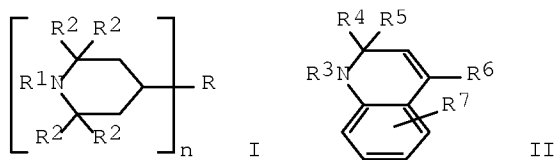
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 61249045	A	19861106	JP 1985-90593	198504 26
			<--	
PRIORITY APPLN. INFO.:			JP 1985-90593	198504 26
			<--	

GI



AB The photopolymerizable title compns. contain film-forming polymers, polymerizable monomers, photopolymn. initiators containing organic peroxides, and 0.1-10% (based on the monomers) ≥1 hindered amines of the formulas I and II (R<sup>1</sup>, R<sup>2</sup> = H, alkyl; n = 1-4; R = 1-4 valent carboxylic acid residue; R<sup>3</sup>-R<sup>6</sup> = H, alkyl; R<sup>7</sup> = H, alkoxy). The compns. show excellent preservation stability, especially to heat. Thus, 10:90 (mol) 2-hydroxyethyl methacrylate-Me methacrylate copolymer (mol. weight 60,000) 60, pentaerythritol triacrylate 40, di-tert-Bu peroxyisophthalate 4, thioflavine S 3, Sanol LS 765 [bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate) 0.5, and methyl Cellosolve 1000 parts were mixed to obtain a composition, which was coated onto an Al

sheet and dried to form a 1- $\mu$  photosensitive polymer film. The resulting plate was kept at 80°, exposed, and developed, showing fog occurrence when kept at 80° for 19 h vs. 0.1 h without Sanol LS 765.

IT 26355-01-1

RL: USES (Uses)

(photosensitive composition containing,  
heat-resistant)

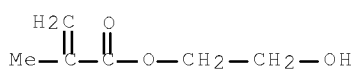
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

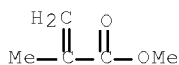
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C001-68

ICS C08K005-34; C08L101-00; G03C001-00

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

ST photosensitive polymer compn heat stability; acrylic  
copolymer amine photosensitive compn

IT Photoimaging compositions and processes

(containing acrylic polymers, heat-resistant)

IT 91-53-2 110-26-9, N,N'-Methylenebisacrylamide 614-45-9,  
tert-Butyl-peroxybenzoate 1326-12-1 2390-54-7, Thioflavine T  
2618-77-1 3524-68-3, Pentaerythritol triacrylate 4986-89-4,  
Pentaerythritol tetraacrylate 9002-89-5, Vinyl alcohol polymer  
9003-39-8, N-Vinylpyrrolidone polymer 15625-89-5,  
Trimethylolpropane triacrylate 26355-01-1 26780-96-1,  
Poly(2,2,4-trimethyl-1,2-dihydroquinoline) 33943-20-3,  
Di-tert-butylperoxyisophthalate 41556-26-7 52829-07-9, Sanol LS  
770 77473-08-6 90164-34-4

RL: USES (Uses)

(photosensitive composition containing,  
heat-resistant)

L38 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:543575 HCAPLUS Full-text

DOCUMENT NUMBER: 105:143575

ORIGINAL REFERENCE NO.: 105:23001a,23004a

TITLE: Photosensitive resin composition  
INVENTOR(S): Yazawa, Toshiya; Goto, Yoshitaka; Kawase, Koji;  
Yamada, Eiichi  
PATENT ASSIGNEE(S): Nippon Oils & Fats Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 61065235	A	19860403	JP 1984-185448	198409 06
			<--	
			JP 1984-185448	198409 06

AB The title composition consisting of a binder resin, a polymerizable compound, and a photopolymn. initiator contains tocopherol at 0.1-5% of the polymerizable monomer. The composition has improved storage stability and is usable as a material for pattern formation. Thus, a mixture containing 2-hydroxyethyl methacrylate-Me methacrylate copolymer 53.8, pentaerythritol triacrylate 44.1, tert-butylanthraquinone 2, tocopherol (E-mix 80) 0.4, and ethyl violet 0.1 part was dissolved in 5000 parts of an iso-PrOH-MEK 1:3 mixture and coated on a paper sheet to 1  $\mu$ m (dry). The storage stability of the material was determined to be 1.5 yr from the photosensitivity measured after storage at 50°.

IT 26355-01-1

RL: USES (Uses)

(photosensitive resin composition containing  
tocopherol and, for improved storage stability)

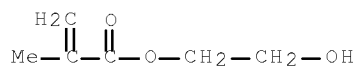
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

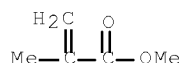
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C001-68  
ICS G03C001-00; G03F007-00

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive resin compn storage stability; tocopherol  
photosensitive resin compn stability

IT Photoimaging compositions and processes  
(containing tocopherol, for improved storage stability)

IT Tocopherols  
RL: USES (Uses)  
(photosensitive resin composition containing, for improved storage stability)

IT 90-94-8 119-61-9, uses and miscellaneous 548-62-9 2390-59-2  
3524-68-3 4986-89-4 5961-99-9 6652-28-4 9003-39-8  
11121-48-5 15625-89-5 25086-15-1 26355-01-1  
33943-20-3 37808-19-8 104493-53-0  
RL: USES (Uses)  
(photosensitive resin composition containing tocopherol and, for improved storage stability)

IT 148-03-8 7616-22-0  
RL: USES (Uses)  
(photosensitive resin composition containing, for improved storage stability)

L38 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:543568 HCAPLUS Full-text

DOCUMENT NUMBER: 105:143568

ORIGINAL REFERENCE NO.: 105:22997a,23000a

TITLE: Photosensitive polymer compositions

INVENTOR(S): Yanagisawa, Kunio; Araki, Yasuhiko; Shobi, Hajime

PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 61025139	A	19860204	JP 1984-146627	19840713
			<--	
JP 03013582	B	19910222		
PRIORITY APPLN. INFO.:			JP 1984-146627	19840713
			<--	

AB The photosensitive polymer compns. contain (A) a photopolymerizable unsatd. monomer having >2 terminal ethylenic group, (B) photosensitizers, (C) a polymer containing a OH-containing component, and (D) a compound containing ≥2 amineimide groups. The component D is typically a compound having the general

formula  $Z(\text{CO:N-N+R}_1\text{R}_2\text{R}_3)_n$  (Z, R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> = aliphatic or aromatic group that may contain O, S, or N atoms;  $n \geq 2$ ) or its polymer. The compns. useful for preparation of printing plates and printed circuits are flame-resistant, storage stable, and readily curable to form durable layers. Thus, a composition containing 5:95  $\beta$ -hydroxyethyl methacrylate-Me methacrylate copolymer 60, pentaerythritol triacrylate 30, benzophenone 3, Michler's ketone 0.5, p-methoxyphenol 0.5, and malonic acid bis[1,1-dimethyl-1-(2-hydroxypropyl)amineimide] 2 parts was dissolved in MEK and coated on a PET film. The obtained material was heat-laminated onto a Cu-laminated board, exposed to UV through a neg. original, separated from the PET film, developed with a 1,1,1-trichloroethane spray, and treated at 150° for 10 min to obtain a fine protective pattern which was resistant to MEK, acetone, CHCl<sub>3</sub>, trichloroethylene, MeOH, 10% H<sub>2</sub>SO<sub>4</sub>, toluene, xylene, and pH 12 aqueous NaOH (at 70°). It was also resistant to 100 cycles of -65° to 125° treatment (each 1 h) and to 2 h dipping in a 260-270° solder bath.

IT 26355-01-1

RL: USES (Uses)

(photosensitive polymer compns. containing photopolymerizable ethylenic monomer and sensitizer and bisamineimide derivative and, for preparation of photoresists and soldering masks and protective coatings and printing plates)

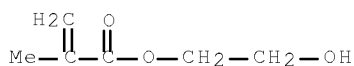
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

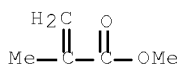
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C001-68

ICS C08F002-48; C08F265-04; G03F007-10

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST printed circuit photosensitive polymer compn;  
photosensitive polymer compn heat resistant; soldering  
mask photosensitive polymer complex

IT Soldering

(masks, photosensitive polymer compns. containing photopolymerizable ethylenic monomer and photosensitizer and hydroxo-containing polymer and bisamineimide derivative for fabrication



- of)
- IT Photoimaging compositions and processes  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and bisamineimide derivative as)
- IT Printing plates  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and bisamineimide derivative for fabrication  
of)
- IT Resists  
(photo-, photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and bisamineimide derivative as)
- IT Electric circuits  
(printed, photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and bisamineimide derivative for fabrication  
of)
- IT 90-94-8P 119-61-9P, uses and miscellaneous 6652-28-4P  
RL: PREP (Preparation)  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and hydroxo-containing polymer  
and bisamineimide derivative and for preparation of photoresists and  
soldering masks and protective coatings and printing plates)
- IT 150-76-5  
RL: USES (Uses)  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and bisamineimide derivative and, for  
preparation  
of photoresists and soldering masks and protective coatings and  
printing plates)
- IT 52352-15-5 104472-31-3 104472-32-4  
RL: USES (Uses)  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and photosensitizer and  
hydroxo-containing polymer and, for preparation of photoresists and  
soldering masks and protective coatings and printing plates)
- IT 26355-01-1 76839-88-8  
RL: USES (Uses)  
(photosensitive polymer compns. containing  
photopolymerizable ethylenic monomer and sensitizer and  
bisamineimide derivative and, for preparation of photoresists and  
soldering masks and protective coatings and printing plates)
- IT 3524-68-3  
RL: USES (Uses)  
(photosensitive polymer compns. containing photosensitizer  
and hydroxo-containing polymer and bisamineamide derivative and, for  
preparation of photoresists and soldering masks and protective  
coatings and printing plates)

L38 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:620360 HCAPLUS Full-text

DOCUMENT NUMBER: 91:220360

ORIGINAL REFERENCE NO.: 91:35371a,35374a

TITLE: Photosensitive resin compositions

INVENTOR(S): Iwaki, Akio; Kita, Toshiyasu; Sasazawa, Tatsuya;  
Sasa, Nobumasa

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan

November 26, 2008

10/577,255

34

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54098613	A	19790803	JP 1978-588	19780109
JP 61042251	B	19860919	JP 1978-588	19780109

PRIORITY APPLN. INFO.: <--

AB A photosensitive resin composition contains (1) a lipophilic resin binder and (2) a photosensitive reaction product of halogenated Lewis acid salt (or perhalate salt) with a diazo resin which is prepared by condensation of a diazo compound with an active carbonyl-group-containing organic compound. The photosensitive resin compns. have good shelf life and give relief images having good mech. strength, and hence the resin compns. are useful in relief printing plates or resists. Thus, a diazo resin (aromatic diazonium compound-aldehyde condensation product; double salt with ZnCl<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>) was dissolved in H<sub>2</sub>O, reacted with NH<sub>4</sub>PF<sub>6</sub> to give a water-insol. diazo resin salt. The salt 0.5, 2-hydroxyethyl methacrylate 30, Me methacrylate-Bu acrylate (30:65:5 weight ratio) copolymer 5.0, tricresyl phosphate 0.5, Victoria Pure Blue BOH 0.1 g, and Me Cellosolve are mixed and the mixture was coated on an Al support. The plate was imagewise exposed and developed with a solution containing PhCH<sub>2</sub>OH and Alkanol XC to give a relief printing plate having excellent durability (≥100,000 prints).

IT 26355-01-1

RL: USES (Uses)

(photosensitive diazo resin compns. containing,  
 for photoresists and relief printing plates)

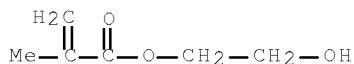
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

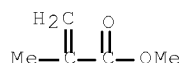
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2

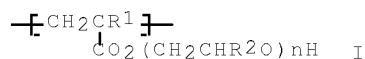


IC G03C001-71; G03F007-02; H05K003-06  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 Section cross-reference(s): 76  
 IT Acrylic polymers, uses and miscellaneous  
 Epoxy resins, uses and miscellaneous  
 RL: USES (Uses)  
 (photosensitive diazo resin compns. containing, for photoresists and relief printing plates)  
 IT 1325-85-5 1330-78-5 2390-60-5 9004-57-3 25035-68-1  
 25035-89-6 25951-39-7 25987-66-0 26355-01-1  
 59592-92-6 67185-56-2 72063-21-9  
 RL: USES (Uses)  
 (photosensitive diazo resin compns. containing, for photoresists and relief printing plates)  
 IT 7790-98-9D, reaction products with diazo photosensitive resin  
 16941-11-0D, reaction products with diazo photosensitive resin  
 RL: USES (Uses)  
 (photosensitive resin compns. containing, for relief images)

L38 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1976:454617 HCAPLUS Full-text  
 DOCUMENT NUMBER: 85:54617  
 ORIGINAL REFERENCE NO.: 85:8773a, 8776a  
 TITLE: Photosensitive compositions for presensitized lithographic printing plates  
 INVENTOR(S): Kita, Nobuyuki; Narutomi, Yasuhisa  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50112101	A	19750903	JP 1974-13464	19740201
			<--	
JP 56009697	B	19810303		
PRIORITY APPLN. INFO.:			JP 1974-13464	A 19740201
				<--

GI



AB Light-sensitive compns. for presensitized lithog. plates are composed of a diazo compound, a copolymer having  $\geq 50$  weight% monomeric units of structure I ( $R_1 = \text{H, Me; } R_2 = \text{H, Me, Et, chloromethyl; } n = 1-10$ ), and a low mol. weight polyurethane resin  $\text{R}_4\text{CONHZNHCO}[\text{O}(\text{CH}_2\text{CHR}^3\text{O})_m\text{CONHZNHCO}]_p\text{R}_4$  [ $R_4 = \text{monohydric alc. residue, HO}(\text{C}_2\text{CHR}^3\text{O})_m$ ,  $Z = \text{isocyanate compound residue; } R_3 = \text{H, Me; } m \geq 2$ ; and  $p = 1-10$ ]. The addition of the polyurethane resin improves the developability of the compns. without reducing their sensitivity, printing durability, and lipophilicity. Thus, toluene diisocyanate 54 and triethylene glycol 30 g were heated at  $140^\circ$  under N,  $\beta$ -hydroxyethyl methacrylate 26 g was then added, and the mixture was heated for 10 hr at  $80^\circ$  to give a polyurethane resin with an isocyanate value of 4.1. The polyurethane resin 0.20,  $\beta$ -hydroxyethyl methacrylate-methyl methacrylate (70-30) copolymer 0.6, 2-methoxy-4-hydroxy-5-benzoylbenzenesulfonate of p-diazodiphenylamine-paraformaldehyde condensate 0.2, Oil Blue 603 (Orient Chemical Co.) 0.03,  $\text{ZnCl}_2$  0.02, and 4,4'-thiobis(3-methyl-6-tert-butylphenol) 0.01 g were mixed, and coated as a 0.8 g/m<sup>2</sup> dry layer on an Al support to give a presensitized lithog. plate which was imagewise exposed to a 30-A C arc lamp at 70 cm for 40 sec. and developed with a solution consisting of Monogen Y-100 60, benzyl alc. 10,  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$  15, citric acid 5, and  $\text{H}_2\text{O}$  910 g. The time required for the development was 7 sec and the printing lifetime was 15,000 prints.

IT 26355-01-1

RL: USES (Uses)

(photopolymerizable composition containing diazo compound, urethane polymer and, for lithog. plates)

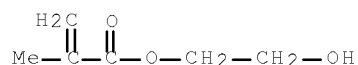
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

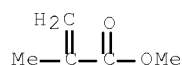
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC G03F; G03C; C08L

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic

Processes)

- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(photopolymerizable compas. containing diazo compound,  
acrylic copolymer and, for presensitized lithog. plates)
- IT Acrylic polymers  
RL: USES (Uses)  
(photopolymerizable compas. containing diazo compound,  
urethane polymer and, for lithog. plates)
- IT Lithographic plates  
(photopolymerizable compas. for, containing diazo compound,  
acrylic copolymer and urethane polymer)
- IT 96-69-5 4065-45-6D, Benzenesulfonic acid,  
5-benzoyl-4-hydroxy-2-methoxy-, reaction product with  
diazodiphenylamine-paraformaldehyde condensate 16072-57-4D,  
Benzenediazonium, 4-(phenylamino)-, reaction product with  
paraformaldehyde and hydroxymethoxybenzoylbenzenesulfonic acid  
30525-89-4D, Paraformaldehyde, reaction product with  
diazodiphenylamine and hydroxymethoxybenzoylbenzenesulfonic acid  
RL: USES (Uses)  
(photopolymerizable composition containing acrylic copolymer,  
urethane polymer and, for lithog. plates)
- IT 59158-36-0  
RL: USES (Uses)  
(photopolymerizable composition containing diazo compound, acrylic  
copolymer and, for lithog. plates)
- IT 26355-01-1  
RL: USES (Uses)  
(photopolymerizable composition containing diazo compound,  
urethane polymer and, for lithog. plates)

L38 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1975:606945 HCAPLUS Full-text  
DOCUMENT NUMBER: 83:206945  
ORIGINAL REFERENCE NO.: 83:32583a,32586a  
TITLE: Photosensitive material  
AUTHOR(S): Foster, J. S.; Brandon, R.; Wagner, H. M.  
CORPORATE SOURCE: Kodak Ltd., London, UK  
SOURCE: Research Disclosure (1975), 137, 17-18  
(No. 13723)  
CODEN: RSDSBB; ISSN: 0374-4353  
DOCUMENT TYPE: Journal; Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RD 137023		19750910	RD 1975-137023	197509 10
			<--	
PRIORITY APPLN. INFO.:			RD 1975-137023	197509 10
			<--	

AB Polymer [57308-05-1] prepared by treating hydroxyethyl methacrylate-methyl  
methacrylate polymer (I) [26355-01-1] (1:5) with Cl3CCOC1 [76-02-8] was mixed  
with styrene [100-42-5] and Mn2(CO)10 [10170-69-1] in cyclohexane, an Al foil

coated with this composition, dried, exposed to Hg vapor lamp, developed to produce a resist image, and used in an offset process giving good clean copies. I was also treated with CH<sub>2</sub>:CHCOCl [814-68-6] to give an unsatd. polymer [57308-04-0] useful for photosensitive composition

IT 26355-01-1F

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)

(preparation and reaction with acid chlorides)

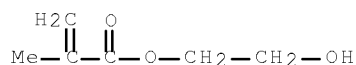
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

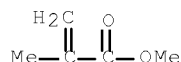
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



CC 36-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

ST trichloroacetyl polymethacrylate photoresist compn;  
 printing plate photoresist

IT Printing plates

(photopolymerizable compns. for, containing trichloroacetyl  
 ester of hydroxyethyl methacrylate polymers)

IT 100-42-5, uses and miscellaneous

RL: USES (Uses)

(photopolymerizable compns. containing, for resists)

IT 10170-69-1

RL: USES (Uses)

(photopolymerizable methacrylate-styrene compns.  
 containing, for resists)

IT 57308-05-1

RL: USES (Uses)

(photosensitive compns. containing, for photoresist)

IT 26355-01-1F

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)

(preparation and reaction with acid chlorides)

L38 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:44397 HCAPLUS Full-text

DOCUMENT NUMBER: 82:44397

November 26, 2008

10/577,255

39

ORIGINAL REFERENCE NO.: 82:7077a, 7080a  
 TITLE: Light-sensitive resin compositions  
 INVENTOR(S): Tsukada, Katsushige; Isobe, Asao; Hayashi, Nobuyuki; Abo, Masahiro; Ogawa, Ken  
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd.  
 SOURCE: Ger. Offen., 20 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2406400	A1	19740905	DE 1974-2406400	197402 11
			<--	
DE 2406400	B2	19770428		
JP 49107333	A	19741011	JP 1973-17914	197302 14
			<--	
JP 50030515	A	19750326	JP 1973-80345	197307 18
			<--	
JP 51040451	B	19761104		
JP 50055404	A	19750515	JP 1973-105064	197309 19
			<--	
JP 52028159	B	19770725		
PRIORITY APPLN. INFO.:			JP 1973-17914	A 197302 14
			<--	
			JP 1973-80345	A 197307 18
			<--	
			JP 1973-105064	A 197309 19
			<--	

AB Light-sensitive resin compns. were manufactured by compounding photopolymerizable glycol acrylates with sensitizers, epoxy resins, diamine or diacid epoxy curing agents, hardening accelerator, and polyacrylates or allyl polymers and were useful for printed circuits and in precision metal work. Thus, a mixture of methacrylic acid-methyl methacrylate copolymer [25086-15-1] 40, pentaerythritol triacrylate [3524-68-3] 30, ECN 1280 [51875-34-4] epoxy resin 25, dicyandiamide [461-58-5] 1.5, benzophenone [119-61-9] 2.7, Michler's ketone [90-94-8] 0.3, p-methoxyphenol [150-76-5] 0.6, and methyl ethyl ketone 200 parts was coated on Cu-plated laminate, dried for 10 min at room temperature then for 10 min at 80° to give a 20 µ light sensitive coat which overlaid with 25 µ transparent poly(ethylene terephthalate) film, exposed to 3 kW super high pressure Hg lamp with 4,000 µW/cm<sup>2</sup> intensity for 60 sec from negative mask, and developed with MeCCl<sub>3</sub> for 1 min to give protective film

applicable to etching, galvanizing or strong alkaline nonelectrolytic chemical plating.

IT 26355-01-1

RL: USES (Uses)

(light-sensitive compns., containing  
acrylate and epoxy resins)

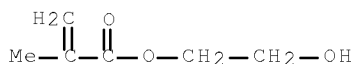
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

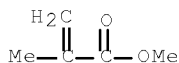
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC C08F; C09D

CC 36-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

ST light sensitive polymer compn; polymethacrylate acrylate  
resin compn; epoxy resin acrylate compn;  
dimethylaminobenzophenone acrylate resin compn

IT Epoxy resins

RL: USES (Uses)

(light-sensitive compns., containing acrylates and  
polymethacrylates)

IT 25053-15-0 25086-15-1 26141-88-8 26355-01-1

RL: USES (Uses)

(light-sensitive compns., containing  
acrylate and epoxy resins)

IT 25068-38-6 56361-55-8 63992-68-7 63992-68-7

RL: USES (Uses)

(light-sensitive compns., containing acrylates and  
polymethacrylates)

IT 3524-68-3 4986-89-4 15625-89-5 25852-47-5 26570-48-9

RL: USES (Uses)

(light-sensitive compns., containing epoxy resins and  
polymethacrylates)

=> d ibib abs hitstr hitind 146 1-58

L46 ANSWER 1 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN



ACCESSION NUMBER: 2007:697903 HCAPLUS Full-text  
 DOCUMENT NUMBER: 147:96375  
 TITLE: Urethane acrylate-based photocurable resin  
 compositions and their  
 stereo-lithography process  
 INVENTOR(S): Ito, Takashi; Hagiwara, Tsuneo; Nakamura,  
 Takayuki; Nakamura, Seisaku  
 PATENT ASSIGNEE(S): Cmet Inc., Japan; Shin-Nakamura Chemical Co.,  
 Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2007161953	A	20070628	JP 2005-363244	200512 16

PRIORITY APPLN. INFO.: <-- JP 2005-363244  
 200512  
 16

AB The compns. contain (i)  $\geq 1$  kinds of urethanized acrylic compds. represented by the general formula  $[(CH_2:CR_1CO_2)dAOCONH]eDNHCO_2GCH_2]fCR_{24-f}$  [I;  $R_1 = H, Me$ ;  $d = 1, 2$ ; when  $d = 2$ , one or both of  $R_1 = Me$ ;  $A =$  diol or triol residue;  $D =$  divalent or trivalent (un)substituted hydrocarbylene;  $G = (CH_2CH_2O)g$  ( $g = 1-4$  integer),  $(CH_2CHMeO)h$  ( $h = 1-4$  integer),  $(CH_2CH_2O)j(CH_2CHMeO)k$  ( $j, k = 1-3$  integer,  $j + k = 2-4$ );  $R_2 = H, alkyl$ ;  $e = 1, 2$ ;  $f = 3, 4$ ], (ii) monofunctional acrylates represented by the general formula  $R_3O_2CCH:CH_2$  (II;  $R_3 = C_5-20$  hydrocarbyl), (iii) (meth)acrylates other than I nor II, and (iv) actinic energy ray-sensitive radical polymerization initiators. Thus, reacting 187.2 g Aronix M 5600 (acrylic acid dimer) with 142 g glycidyl methacrylate in the presence of  $Et_3N$  gave a glycerin (meth)acrylate of a formula  $HOCH(CH_2CO_2CMe:CH_2)(CH_2CO_2CH_2CH_2CO_2CH:CH_2)$ , 288.8 g of which was mixed with 0.48 g metoquinone, added dropwise to a mixture of isophorone diisocyanate 177.6, morpholinoacrylamide (III) 205.6, and dibutyltin dilaurate 0.48 g, and stirred at  $80-90^\circ$  for 2 h. Then 72.3 g pentaerythritol propylene oxide 4 mol adduct was added dropwise to the mixture and reacted at  $80-90^\circ$  to give a transparent viscous liquid of the reaction product containing an urethanized acrylic compound I [ $d = 2$ ,  $R_1 = H$  and  $Me$ ,  $A =$  glycerin residue;  $e = 1$ ,  $D =$  isophorone group,  $G =$  propylene oxide group ( $h = 1$ ),  $f = 4$ ] (Ia) and III. A transparent viscous (500 mPa.s at  $25^\circ$ ) composition comprised the reaction product containing Ia and III 500, lauryl acrylate 100, isobornyl acrylate 200, tricyclodecanedimethanol diacrylate 300, and Irgacure 651 [2,2-dimethoxy-1,2-diphenylethan-1-one] 50 g. A 0.1-mm thick layer of the composition was scanned with a UV lamp via a stereo-lithog. apparatus having a TFT-VGA liquid crystalline mask whose image was changed dynamically and continuously as scanned to give a test piece with low curing shrinkage.

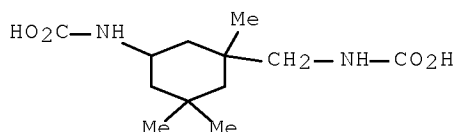
IT 942430-57-1F  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (urethane acrylate-based photocurable resin compns. and  
 their stereo-lithog. process)  
 RN 942430-57-1 HCAPLUS  
 CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy-,

ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), tetraester with N-[3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid mono[2-[(1-oxo-2-propen-1-yl)oxy]ethyl] ester (CA INDEX NAME)

CM 1

CRN 52337-42-5

CMF C12 H22 N2 O4

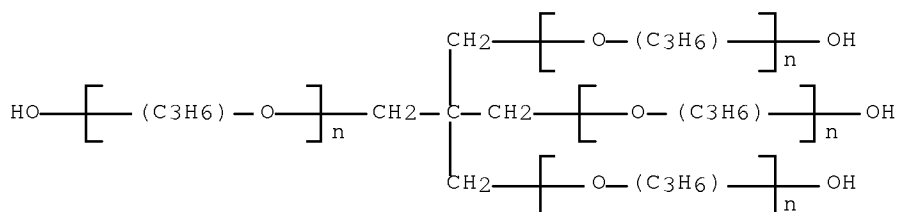


CM 2

CRN 9051-49-4

CMF (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> C5 H12 O4

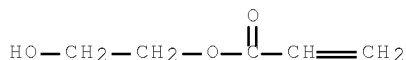
CCI IDS, PMS



CM 3

CRN 818-61-1

CMF C5 H8 O3



CC 37-6 (Plastics Manufacture and Processing)  
 ST urethane acrylate photocurable compn stereo lithog  
 IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (acrylate-terminated, polyoxyalkylene-; urethane acrylate-based  
 photocurable resin compns. for stereo-lithog.)  
 IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyoxyalkylene-, crosslinked; urethane acrylate-based

- photocurable resin compns. for stereo-lithog.)
- IT Polyoxyalkylenes, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyurethane-, crosslinked; urethane acrylate-based photocurable resin compns. for stereo-lithog.)
- IT Lithography  
(urethane acrylate-based photocurable resin compns. for stereo-lithog.)
- IT 127823-21-6, A-TCM  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(A-TCM; urethane acrylate-based photocurable resin compns. and their stereo-lithog. process)
- IT 942430-54-8P 942430-55-9P 942430-56-0P 942430-58-2P  
942434-81-3P 942439-81-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked; urethane acrylate-based photocurable resin compns. and their stereo-lithog. process)
- IT 24650-42-8, Irgacure 651 75980-60-8, Darocure TPO  
RL: CAT (Catalyst use); USES (Uses)  
(urethane acrylate-based photocurable resin compns. and their stereo-lithog. process)
- IT 942430-57-1P 942434-80-2P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(urethane acrylate-based photocurable resin compns. and their stereo-lithog. process)
- IT 5888-33-5, Isobornyl acrylate 7398-56-3, FA 513A 42594-17-2, A-DCP 942434-82-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(urethane acrylate-based photocurable resin compns. and their stereo-lithog. process)
- IT 286426-01-5P 286426-03-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(urethane acrylate-based photocurable resin compns. for stereo-lithog.)
- IT 2156-97-0, Lauryl acrylate 53058-82-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(urethane acrylate-based photocurable resin compns. for stereo-lithog.)

L46 ANSWER 2 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2007:58799 HCAPLUS Full-text  
DOCUMENT NUMBER: 146:216374  
TITLE: Photosensitive composition and laminated products  
INVENTOR(S): Igarashi, Tsutomu; Yamashita, Hidetoshi  
PATENT ASSIGNEE(S): Asahi Kasei Electronics Co., Ltd., Japan  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 29pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 CN 1892424 A 20070110 CN 2006-10094231 200606  
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 JP 2007041497 A 20070215 JP 2005-354220 200512  
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 JP 2005-354221 A 200512  
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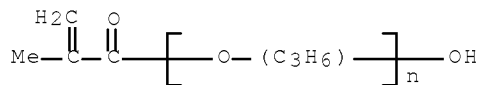
OTHER SOURCE(S): MARPAT 146:216374

AB The title composition comprises carboxyl-containing binder resins 20-90, photopolymerizable unsatd. compds. 3-70, and photopolymn. initiators 0.1-20 weight%. The carboxyl-containing binder resins have acid value of 100-600 and weight-average mol. weight of 5,000-500,000. The photopolymerizable unsatd. compds. are bisphenol A-polyoxyalkylene ether (meth)acrylates. The photoresist resin composition and its laminate have the advantages of good dispersing stability in the developing solution, no coacervate formation, and good resolution and binding property after developing. The photoresist laminate has pore-covering property and good antietching property.

IT 39420-45-6D, Blemmer PP 1000, reaction products with hexamethylene diisocyanate, methacrylates  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition and laminated products)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
 NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Photoresists  
 (photosensitive composition and laminated products)

IT Laminated plastics, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition and laminated products)

IT 90-93-7, 4,4'-Bis(diethylamino)diphenyl ketone 1338-39-2, Ionet S 20 1707-67-1D, 2-(2-Chlorophenyl)-4,5-diphenylimidazole, dimer 9005-70-3, Newcol 3-85 26266-58-0, Newcol 3-80  
 RL: MOA (Modifier or additive use); USES (Uses)

(photosensitive composition and laminated products)

IT 79-41-4D, Methacrylic acid, reaction products with reaction products of hexamethylene diisocyanate and polypropylene glycol monomethacrylate, 548-62-9, Crystal violet 633-03-4, Diamond Green GH 25035-69-2, Methyl methacrylate-methacrylic acid-butyl acrylate copolymer 25035-81-8, Methyl methacrylate-methacrylic acid-styrene copolymer 37353-75-6, Bisphenol A-propylene oxide adduct 39420-45-6D, Blemmer PP 1000, reaction products with hexamethylene diisocyanate, methacrylates 41637-38-1, NK ester BPE 500 56744-60-6, NK ester BPE 200 65722-01-2, Victoria Pure Blue 72270-11-2, LS-100A 119564-97-5 194497-24-0  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition and laminated products)

L46 ANSWER 3 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1202448 HCAPLUS Full-text

DOCUMENT NUMBER: 145:497693

TITLE: Modified silica particles, photosensitive composition containing same, and photosensitive lithography plate precursors

INVENTOR(S): Hayashi, Koji

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: PCT Int. Appl., 64pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006121172	A1	20061116	WO 2006-JP309610	20060508
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006317716	A	20061124	JP 2005-140411	20050512
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EP 1880978	A1	20080123	EP 2006-746357	20060508
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R: DE, FR, GB				
CN 101175695	A	20080507	CN 2006-80016397	200711

12

PRIORITY APPLN. INFO.:

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JP 2005-140411

A

200505

12

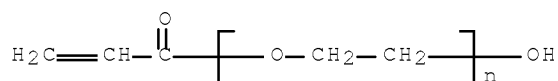
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WO 2006-JP309610

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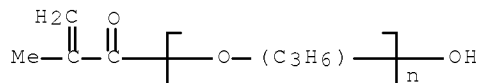
200605

08

- AB Adhesion between a photosensitive layer and a supporting body of a photosensitive lithog. plate is adequately maintained after exposure to light. Modified silica particles whose surfaces are modified with an organic compound having at least one ethylenically unsatd. group, at least one hydrophilic moiety and at least one silyloxy group are blended in a photosensitive layer of a photosensitive lithog. plate.
- IT 26403-58-7DP, Polyethylene glycol monoacrylate, reaction product with alkyl trialkoxy silane, polymerized 39420-45-6DP, Polypropylene glycol monomethacrylate, reaction product with alkyl trialkoxy silane, polymerized  
 RL: SPN (Synthetical preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (modified silica particles, photosensitive composition containing same, and photosensitive lithog. plate precursors)
- RN 26403-58-7 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



- RN 39420-45-6 HCAPLUS
- CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST silica particle photosensitive compn lithog plate precursor
- IT Lithographic plates  
 (photosensitive precursors; modified silica particles, photosensitive composition containing same, and photosensitive lithog. plate precursors)
- IT 107-11-9DP, Allylamine, copolymer with acrylic monomer 107-18-6DP, Allyl alcohol, copolymer with acrylic monomer 9004-74-4DP, Polyethylene glycol monomethyl ether, reaction product with alkyl

trialkoxysilane, polymerized 24801-88-5DP, reaction product with alkyloxyethylene ether 26403-58-7DP, Polyethylene glycol monoacrylate, reaction product with alkyl trialkoxysilane, polymerized 39420-45-6DP, Polypropylene glycol monomethacrylate, reaction product with alkyl trialkoxysilane, polymerized 860478-34-8DP, Bayhydur VPLS 2306, reaction product with alkyl trialkoxysilane, polymerized

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(modified silica particles, photosensitive composition containing same, and photosensitive lithog. plate precursors)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 4 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:543953 HCAPLUS Full-text

DOCUMENT NUMBER: 145:37339

TITLE: Photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head

INVENTOR(S): Ishikura, Hiroe; Shiba, Shoji; Okano, Akihiko

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan

SOURCE: U.S. Pat. Appl. Publ., 14 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20060117564	A1	20060608	US 2005-291956	20051202
			<--	
JP 2006162769	A	20060622	JP 2004-351347	20041203
			<--	
PRIORITY APPLN. INFO.:			JP 2004-351347	A 20041203

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AB The present invention provides a method for manufacturing a high quality ink jet head, and an ink jet head manufactured by such a method, in which, in a case where a coating resin layer constituting ink flow path walls is formed, even when a solvent having a strong dissolving force is used, it is not feared that a configuration of an ink flow path pattern is distorted. In the method, a photosensitive resin composition layer in which an inter-mol. bridging reaction proceeds by irradiation of an ionization radiant ray having a first wavelength band and a mol. decaying reaction of main chain decomposing type of the resin proceeds by irradiation of an ionization radiant ray having a second wavelength band different from the first wavelength band is formed on a substrate on which energy generating elements were provided. Thereafter, an ink flow path pattern is formed by the irradiation of the ionization radiant ray having the first wavelength band and a developing process. Then, a

coating resin layer constituting ink flow path walls is formed on the ink flow path pattern. After ink discharge ports are formed, the photosensitive resin composition layer forming the ink flow path pattern is dissolved and removed by irradiating the ionization radiant ray having the second wavelength band.

IT 31292-66-7, Hydroxymethyl methacrylamide-methyl methacrylate copolymer

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

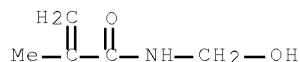
RN 31292-66-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N-(hydroxymethyl)-2-methyl-2-propenamamide (9CI) (CA INDEX NAME)

CM 1

CRN 923-02-4

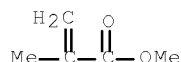
CMF C5 H9 N O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



INCL 029890100; 347001000; 430270100

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST ink jet recording head printer manuf photosensitive resin compn

IT Photoimaging materials

(photopolymerizable; photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

IT Ink-jet printer heads

Photoresists

(photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

IT Aminoplasts

RL: CAT (Catalyst use); USES (Uses)

(photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

IT 125054-47-9, SP 170

RL: CAT (Catalyst use); USES (Uses)



(cationic photopolymn. initiator; photosensitive resin composition, ink jet recording head using such compn . and method for manufacturing such recording head)

IT 9003-08-1, MW 30HM

RL: CAT (Catalyst use); USES (Uses)

(photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

IT 26141-88-8, Glycidyl methacrylate-methyl methacrylate copolymer

31260-64-7 31292-66-7, Hydroxymethyl methacrylamide-methyl

methacrylate copolymer 68103-75-3, Glycidyl methacrylate-phenyl

methacrylate copolymer 85920-08-7, Glycidyl methacrylate-methyl

isopropenyl ketone copolymer 889447-24-9, Glycidyl

methacrylate-phenyl isopropenyl ketone copolymer 889447-26-1,

Glycidyl methacrylate-methyl isopropenyl ketone-methyl methacrylate copolymer

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(photosensitive resin composition, ink jet recording head using such composition and method for manufacturing such recording head)

L46 ANSWER 5 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:437599 HCAPLUS Full-text

DOCUMENT NUMBER: 144:442679

TITLE: Photosensitive polymer compositions for adhesives, their application to laminates and printing plates, and their manufacture

INVENTOR(S): Yamada, Hiroshi; Tomeba, Hiroshi

PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006117858	A	20060511	JP 2004-309156	20041025

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PRIORITY APPLN. INFO.: JP 2004-309156

20041025

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AB The compns. contain (a) polymers having number-average mol. weight (Mn) 1000-500,000 and (b) polymerizable unsatd. group-containing organic compds. having Mn 100-1000, wherein the polymers of (a) contain 20-100 weight% of compds. with main chains containing carbonate bonds and urethane bonds and are photocrosslinkable. Laminates bearing adhesives obtained by applying the compns. on sheet or cylindrical supports and photocrosslinking the compns. are also claimed. Printing substrates in which polyester film-supported sheet printing (master) plates are bonded on the adhesives of the laminates in such a way that the polyester film side are in contact with the adhesive side, are also claimed. The adhesives are manufactured by applying the compns. on sheet or cylindrical supports to form 0.5  $\mu$ m to 5 mm-thick layers and irradiating light to the layers for photocrosslinking. The adhesives with specific

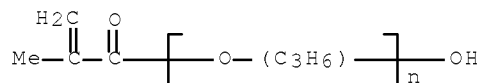
adhesion to polyesters are suitable for fixing flexible polyester film supports on plate cylinders of printers.

IT 39420-45-6, Polypropylene glycol monomethacrylate

RL: TEM (Technical or engineered material use); USES (Uses)  
(photocurable adhesive containing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT Laminated materials

(adhesive layer-bearing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT Adhesives

(photocurable; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-, methacryl-terminated, photocurable adhesive containing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT Polycarbonates, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane-, methacryl-terminated, photocurable adhesive containing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT Flexographic printing plates

(supports; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT 918885-95-7P, PCDLL 4672-TDI copolymer carbamate with 2-methacryloyloxy ethylisocyanate

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photocurable adhesive containing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT 109-17-1, Tetraethylene glycol dimethacrylate 142-90-5, Lauryl methacrylate 3290-92-4, Trimethylolpropane trimethacrylate 10595-06-9, Phenoxyethyl methacrylate 13532-94-0 39420-45-6, Polypropylene glycol monomethacrylate 701908-05-6, Diethylene glycol-2-ethylhexyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photocurable adhesive containing; photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

IT 25038-59-9, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive polymer compns. for adhesives with specific adhesion to polyester film supports in printing plates)

L46 ANSWER 6 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2006:125370 HCAPLUS Full-text  
DOCUMENT NUMBER: 144:202157  
TITLE: Photosensitive resin composition for manufacturing display panel electrode  
INVENTOR(S): Arihisa, Shinji; Ichise, Hiroyuki; Fujimori, Jiro  
PATENT ASSIGNEE(S): Asahi Kasei Electronics Co., Ltd., Japan; Pioneer Electronic Corp.  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

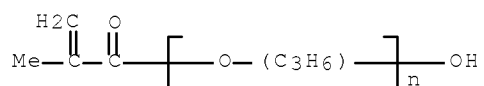
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006039386	A	20060209	JP 2004-221838	20040729

PRIORITY APPLN. INFO.: <-- JP 2004-221838 20040729

AB Disclosed is a photosensitive resin composition comprising (a) an alkali soluble polymer 30-76%, (b) an addition polymerizable monomer 15-60%, (c) a photopolymerization initiator 0.01-20%, wherein the addition polymerizable monomer contains OH and C=C and the composition is applied on an Al or its alloy substrate.

IT 39420-45-6D, Blemmer PP1000, reaction product with hexamethylene diisocyanate  
RL: NUU (Other use, unclassified); USES (Uses)  
(photosensitive resin composition for manufacture of display panel electrodes)

RN 39420-45-6 HCAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)

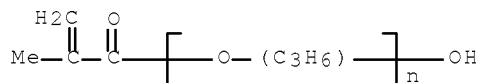


- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST photosensitive resin compn display panel electrode resist
- IT Optical imaging devices  
Photoimaging materials  
Plasma display panels  
Resists  
(photosensitive resin composition for manufacture of display panel electrodes)
- IT Aluminum alloy, base  
RL: NUU (Other use, unclassified); USES (Uses)  
(photosensitive resin composition for manufacture of display panel electrodes)
- IT 109-17-1, Tetraethylene glycol dimethacrylate 822-06-0D, Hexamethylene diisocyanate, reaction product with Blemmer PP1000 3524-68-3, Pentaerythritol triacrylate 7429-90-5, Aluminum, uses 15625-89-5, Trimethylolpropane triacrylate 28961-43-5, Ethoxylated trimethylolpropane triacrylate 39420-45-6D, Blemmer PP1000, reaction product with hexamethylene diisocyanate 57491-53-9, Nonaethylene glycol diacrylate 61370-16-9,  $\beta$ -Hydroxypropyl- $\beta'$ -(acryloyloxy)propylphthalate  
RL: NUU (Other use, unclassified); USES (Uses)  
(photosensitive resin composition for manufacture of display panel electrodes)

L46 ANSWER 7 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2005:1153363 HCAPLUS Full-text  
DOCUMENT NUMBER: 143:430033  
TITLE: Photosensitive resin compositions and their applications  
INVENTOR(S): Igarashi, Tsutomu; Yamashita, Hidetoshi  
PATENT ASSIGNEE(S): Asahi Kasei Electronics Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005301101	A	20051027	JP 2004-119974	20040415
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PRIORITY APPLN. INFO.:			JP 2004-119974	20040415
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OTHER SOURCE(S):			MARPAT 143:430033	

- AB The title composition contains 20-90% binder resin, 3-70% photopolymerizable unsatd. compds., and 0.1-10 % a photopolymn. initiator, wherein the binder resin contains 100-600 acid value corresponding to carboxyl groups, benzyl (meth)acrylate-based repeating units and has 5,000-500,000 weight average mol. weight and wherein the photopolymerizable compound has general structure  $H_2=C(R_1)-COO-(C_2H_4O)n_1-(CH_2C(CH_3)HO)n_2-(C_2H_4O)n_3-CO-C(R_2)=CH_2$  ( $R_1, 2 = H, CH_3$ ;  $n_1-3 = \text{integer } 2-20$ ) or alkoxyated bisphenol A diacrylate derivative The composition provides good electroconductive pattern profile and is suitable for chip on film(COF) devices.
- IT 39420-45-6, Blemmer PP 1000  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polymerizable compound; photosensitive resin compns. and their applications)
- RN 39420-45-6 HCAPLUS
- CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



- IC ICM G03F007-033  
 ICS C08F002-44; C08F002-50; C08F020-26; G03F007-004; G03F007-027; G03F007-029; H05K003-06; H05K003-18
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76
- ST photosensitive resin compn polymer
- IT Printed circuit boards  
 (chip on film(COF); photosensitive resin compns. and their applications)
- IT Photoresists  
 Semiconductor device fabrication  
 (photosensitive resin compns. and their applications)
- IT 3290-92-4, Trimethylolpropane trimethacrylate 15625-89-5, Trimethylolpropane triacrylate 28961-43-5, NK Ester A-TMPT 3EO 39420-45-6, Blemmer PP 1000 41637-38-1, NK Ester BPE 500 56744-60-6, NK-BPE 200 57491-53-9, Nonaethylene glycol diacrylate 83868-76-2, Ethoxylated propoxylated bisphenol A dimethacrylate 122985-55-1, Ethylene oxide-propylene oxide block copolymer dimethacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polymerizable compound; photosensitive resin compns. and their applications)
- IT 25035-69-2, Methyl methacrylate/methacrylic acid/butyl acrylate copolymer 25035-81-8, Methyl methacrylate/methacrylic acid/styrene copolymer 65697-21-4, Benzyl methacrylate/methacrylic acid copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (resin; photosensitive resin compns. and their applications)

TITLE: Manufacture of plasma display front panels equipped with precisely patterned spacer layers with uniform thickness, photosensitive inorganic paste compositions therefor, and unsintered sheets therefrom

INVENTOR(S): Obitani, Hiroyuki; Oshio, Kiminori; Kumasawa, Akira; Fushida, Hitoshi

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005215134	A	20050811	JP 2004-19629	20040128
WO 2005073809	A1	20050811	WO 2005-JP1556	20050127
<p>W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW</p> <p>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG</p>				
CN 1910518	A	20070207	CN 2005-80003023	20050127
KR 818222	B1	20080402	KR 2006-715117	20060726
<p>PRIORITY APPLN. INFO.: JP 2004-19629 A 20040128</p> <p>WO 2005-JP1556 W 20050127</p>				
<p>AB The compns. comprise photopolymerizable monomers, inorg. powders, and photopolymn. initiators containing those of Norrish type I (e.g., benzoin ethers, benzyl ketals) and those of H abstraction type (e.g., aromatic ketones, thioxanthones). Plasma display front panels are manufactured by (i) successively forming of (A) unsintered dielec. layers containing inorg. powders and binder resins and (B) plural unsintered spacer layers comprising</p>				

the above compns., on glass substrates equipped with plural surface electrodes, (ii) radiating B with patterned lights and developing, and (iii) firing the layers A and B simultaneously to give dielec. layers and plural spacer layers with uniform thickness. Unsintered sheets having B on release films and optionally A and/or water-soluble/swellable sinterable interlayers on B are useful for laminating on the glass substrates.

IT 56315-94-7, Isobutyl methacrylate-hydroxyethyl methacrylate copolymer

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dielec. layers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)

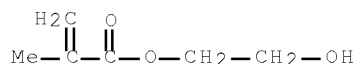
RN 56315-94-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-methylpropyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

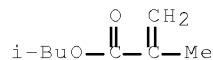
CMF C6 H10 O3



CM 2

CRN 97-86-9

CMF C8 H14 O2



IC ICM G03F007-004

ICS G03F007-029; G03F007-031; G03F007-40; H01J009-02; H01J011-02

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 57

IT Dicarbonyl compounds

RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(Ph, Norrish type I photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)

IT Alcohols, processes

RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(amino, alkyl, hydrogen abstraction-type photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste

compos.)

- IT Ketones, processes  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(aromatic, hydrogen abstraction-type photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Ketals  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(benzyl, Norrish type I photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Aromatic compounds  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(dialkylamino-containing, hydrogen abstraction-type photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Glass, processes  
RL: CPS (Chemical process); DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(frits, spacers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Electric insulators  
Glass substrates  
Lamination  
Photolithography  
Plasma display panels  
Sintering  
(manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Inorganic compounds  
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)
- IT Oximes  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(phenylacetyl, Norrish type I photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compos.)



- IT Photoimaging materials  
(photopolymerizable; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT Polymerization catalysts  
(photopolymn.; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT Frits  
(spacers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 582-24-1D,  $\alpha$ -Hydroxyacetophenone, derivs. 613-89-8D,  $\alpha$ -Aminoacetophenone, derivs. 13840-40-9D, Phosphine oxide, acyl derivs. 24650-42-8, IR 651  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(Norrish type I photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 56315-94-7, Isobutyl methacrylate-hydroxyethyl methacrylate copolymer  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(dielec. layers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 84-65-1D, Anthraquinone, derivs. 82799-44-8, DETX-S  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(hydrogen abstraction-type photopolymn. initiators; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 177646-18-3, Poval PVA 235  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(interlayers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 68406-95-1, Light Ester HO-MPP  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); TEM (Technical or engineered material use); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
(manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 25038-59-9, Purex A 24, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(release films; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)
- IT 805246-81-5P, HO-MPP homopolymer  
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(spacers; manufacture of plasma display front panels equipped with uniform-thickness spacer layers from photosensitive inorg. paste compns.)

L46 ANSWER 9 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:323300 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:400561  
 TITLE: Photosensitive resin composition and  
 photosensitive resin laminate therefrom  
 INVENTOR(S): Inoue, Naoto; Tomita, Hiroaki  
 PATENT ASSIGNEE(S): Asahi Kasei Electronics Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005099339	A	20050414	JP 2003-331962	200309 24
				<--
PRIORITY APPLN. INFO.:			JP 2003-331962	200309 24
				<--

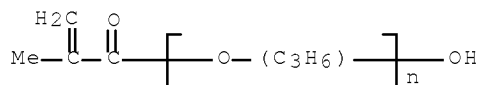
OTHER SOURCE(S): MARPAT 142:400561

AB Disclosed is a photosensitive resin composition comprising (a) a binder resin 20-90% containing a linear polymer with a weight average mol. weight 2-5 + 105 and a carboxy group at an acid equivalence 100-600, (b) a photopolymerizable unsatd. compound 3-70% H<sub>2</sub>C=CR<sub>1</sub>COO(A-O)n<sub>1</sub>-(B-O)n<sub>2</sub>-(CH<sub>2</sub>)n<sub>3</sub>-CR<sub>2</sub>R<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> = H, Me; R<sub>2</sub> = H, C<sub>1</sub>-20 alkyl; R<sub>3,4</sub> = C<sub>1</sub>-20 alkyl; A = C<sub>2</sub>H<sub>4</sub>; B = C<sub>3</sub>H<sub>6</sub>; n<sub>1</sub> = 1-30; n<sub>2</sub> = 0-30; n<sub>3</sub> = 0-20), and a photopolymn. initiator 0.1-20% such as 2,4,5-triarylimidazole dimer.

IT 39420-45-6D, Polypropylene glycol monomethacrylate, reaction products with hexamethylenediisocyanate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive resin composition)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-027  
 ICS C08F002-50; C08F290-06; G03F007-004; G03F007-029; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST photosensitive resin compn laminate triarylimidazole dimer

photopolymn initiator  
 IT Polymerization catalysts  
     (photopolymn.; photosensitive resin composition)  
 IT Photoresists  
     Resists  
     (photosensitive resin composition)  
 IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone  
     RL: CAT (Catalyst use); USES (Uses)  
     (photopolymn. initiator; photosensitive resin composition)  
 IT 822-06-0D, Hexamethylenediisocyanate, reaction products with  
     oligopropylene glycol monomethacrylate 9003-11-6D, 4-nonylphenyl  
     and acrylate terminated 25035-69-2, Butyl acrylate-methacrylic  
     acid-methyl methacrylate copolymer 39420-45-6D,  
     Polypropylene glycol monomethacrylate, reaction products with  
     hexamethylenediisocyanate 84154-99-4 225109-16-0 849791-72-6,  
     Dodecapropylene glycol-triethylene glycol triblock copolymer  
     dimethacrylate  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (photosensitive resin composition)

L46 ANSWER 10 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:302419 HCAPLUS Full-text

DOCUMENT NUMBER: 142:374901

TITLE: Photosensitive polymer compositions,  
 their fire-resistant dry films, and articles  
 having the dry films

INVENTOR(S): Funaki, Katsuhiko; Tahara, Shuji; Fujita,  
 Kazuto; Okawado, Etsuo

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005091399	A	20050407	JP 2003-320492	200309 12

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PRIORITY APPLN. INFO.: JP 2003-320492

200309  
12

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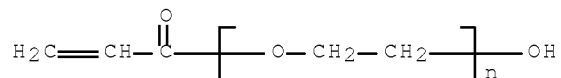
AB The comps., useful for insulator films of flexible printed circuit boards, comprise (A) bis(meth)acrylates  $H_2C:CR_3CO(OR_1)nOCONHR_5NHCO_2(R_2O)mCOC(R_4):CH_2$  ( $R_1, R_2 = C_2-5$  aliphatic hydrocarbylene;  $R_3, R_4 = H, Me$ ;  $R_5 =$  benzene-containing divalent aromatic group;  $n, m = 1-15$ ), (B) polyimide precursors, and (C) photopolymn. catalysts. Thus, a composition containing (a) Blemmer DP 403AU (bismethacrylate prepared from polyethylene glycol monomethacrylate and MDI), (b) a polyamic acid prepared from pyromellitic dianhydride, Jeffamine D 400 (polypropylene glycol diamine), and 1,3-bis(3-aminophenoxy)benzene, and (c) Speedcure TPO (photopolymn. catalyst) was applied on a PET film, dried, exposed, and developed with 1% aqueous  $Na_2CO_3$  solution to give a test piece showing good chemical, solder heat, and bending crack resistance.

IT 26403-58-7DP, Blemmer AE 200, carbamate ester with polymeric MDI

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (crosslinked; photosensitive polymer compns.  
 for fire-resistant dry films)

RN 26403-58-7 HCAPLUS

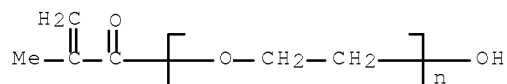
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IT 25736-86-1DP, Blemmer PE 350, diester derivs. with Cosmonate ND, polymers 26403-58-7DP, Polyethylene glycol monoacrylate, diester derivs. with Cosmonate PH, polymers  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photosensitive polymer compns. for  
 fire-resistant dry films)

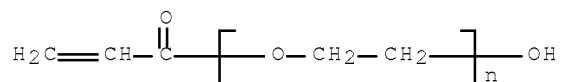
RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



RN 26403-58-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-027

ICS G03F007-004; G03F007-037; H05K003-28; H05K003-46

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74, 76

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyoxyalkylene-; photosensitive polymer compns.  
 . for fire-resistant dry films)

IT Plastic films

(dry; photosensitive polymer compns. for fire-resistant dry films)

IT Printed circuit boards

(flexible; photosensitive polymer compns. for fire-resistant dry films)

- IT Chemically resistant materials  
Dielectric films  
Fire-resistant materials  
(photosensitive polymer compns. for fire-resistant dry films)
- IT Polyethers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamic acid-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyethers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamic acid-polyester-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamic acid-polyether-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyamic acids  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyether-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyether-polyimide-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyimides, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyether-polyoxyalkylene-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyethers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyimide-polyoxyalkylene-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyamic acids  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyether-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyether-polyimide-, block; photosensitive polymer compns. for fire-resistant dry films)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyether-polyimi

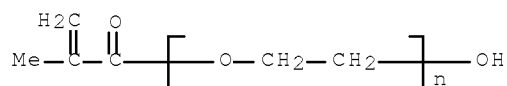
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INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1103855	A1	20010530	EP 2000-125812	
				200011 24
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			R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
JP 2001217235	A	20010810	JP 2000-319436	200010 19
			<--	
JP 2001215701	A	20010810	JP 2000-319438	200010 19
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JP 2002124743	A	20020426	JP 2000-319439	200010 19
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JP 2001214058	A	20010807	JP 2000-357476	200011 24
			<--	
TW 528930	B	20030421	TW 2000-89125013	200011 24
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US 6696529	B1	20040224	US 2000-721666	200011 27
			<--	
US 20040162363	A1	20040819	US 2003-736529	200312 17
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US 7115673	B2	20061003		
PRIORITY APPLN. INFO.:			JP 1999-335851	A 199911 26
			<--	
			JP 2000-238807	A 200008 07
			<--	
			US 2000-721666	A3 200011 27
			<--	
AB			The photosensitive resin composition comprises a polyamic acid resin, a photosensitive agent, a dispersible compound which is dispersible in the polyamic acid resin, and a solvent. The porous resin is obtained by removing the dispersible compound from the photosensitive resin composition to make the composition porous, and curing the porous photosensitive resin composition. The porous resin enables to form a fine circuit pattern and has a low dielec. constant and, when used as an insulating layer of a circuit board, brings about improved high frequency characteristics.	
IT			25736-86-1, Polyethylene glycol monomethacrylate	
			RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)	
			(removing dispersible compound to make photosensitive resin composition porous)	

RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)-  
 $\omega$ -hydroxy- (CA INDEX NAME)

IC ICM G03F007-037

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 76ST porous photosensitive resin compn insulating layer circuit  
board; insulating film porous material coating photosensitive resin

IT Polyurethanes, processes

RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(acrylates, dispersible compound; removing dispersible compound to  
make photosensitive resin composition porous)

IT Porous materials

(coatings; porous photosensitive resin composition based on  
polyamic acid resin for circuit board and wireless suspension  
board insulating layer)

IT Construction materials

(insulating boards; porous photosensitive resin composition  
based on polyamic acid resin for circuit board and wireless  
suspension board insulating layer)

IT Dielectric films

Porous materials

Printed circuit boards

(porous photosensitive resin composition based on polyamic  
acid resin for circuit board and wireless suspension board  
insulating layer)

IT Polyamic acids

RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); PROC (Process); USES  
(Uses)(porous photosensitive resin composition based on polyamic  
acid resin for circuit board and wireless suspension board  
insulating layer)

IT Coating materials

(porous; porous photosensitive resin composition based on  
polyamic acid resin for circuit board and wireless suspension  
board insulating layer)

IT 28155-61-5P 153554-40-6P 340699-12-9P

RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); PROC (Process); USES  
(Uses)(porous photosensitive resin composition based on polyamic  
acid resin for circuit board and wireless suspension board  
insulating layer)

IT 25736-86-1, Polyethylene glycol monomethacrylate

26570-48-9, Polyethylene glycol diacrylate 26915-72-0,

Polyethylene glycol monomethyl ether methacrylate

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(removing dispersible compound to make photosensitive resin composition porous)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 26 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:299122 HCAPLUS Full-text

DOCUMENT NUMBER: 134:334276

TITLE: Photosensitive polymer compositions, their laminates, and manufacture of printed circuit boards

INVENTOR(S): Yoshida, Tomoko; Tomita, Hiroaki

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001117225	A	20010427	JP 1999-292688	19991014

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PRIORITY APPLN. INFO.: JP 1999-292688

199910

14

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AB The compns. comprise (i) 20-80 weight% alkaline-soluble polymers containing CO<sub>2</sub>H of acid value 100-600 and having weight average mol. weight 10000-500,000, (ii) 10-40 weight% urethane compds. (A) obtained by reaction of (a) terminate isocyanate on polyurethanes derived from diisocyanate and OH-terminated compds. and (b) ethylenically unsatd. compds. having groups containing active H and/or (B) CH<sub>2</sub>:CR<sub>1</sub>COR<sub>2</sub>OCONHWNHCOR<sub>3</sub>OCOCR<sub>4</sub>:CH<sub>2</sub> (R<sub>1</sub>, R<sub>4</sub> = H, Me; R<sub>2</sub>-3 = (OCH<sub>2</sub>CH<sub>2</sub>)n<sub>1</sub>, (OCH<sub>2</sub>CHMe)n<sub>2</sub>, (OCHMeCH<sub>2</sub>)n<sub>3</sub>, (OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>)n<sub>4</sub>, (OCHMeCH<sub>2</sub>CH<sub>2</sub>)n<sub>5</sub>, (OCH<sub>2</sub>CHMeCH<sub>2</sub>)n<sub>6</sub>; total of n<sub>1</sub> to n<sub>6</sub> = integer of 1-25; W = C<sub>2</sub>-20 bivalent hydrocarbon), (iii) 5-30 weight% photopolymerizable monomers having ≥3 ethylenically unsatd. groups, and (iv) 0.01-30 weight% photoinitiators. The compns. show 0-20% swelling of developing agents, have tent piercing strength ≥2.45 N, and tent piercing elongation ≥1 mm. Supports laminated with layers of the compns. are also claimed. Printed circuits are manufactured by heat-press lamination of the above stated laminate on a substrate metal surface, imagewise exposure of the laminate through a photomask, development of the layer with an aqueous alkaline solution, etching or plating of the exposed metal surface, and removal of the cured resist with an aqueous alkaline solution stronger than that used for development. The support of the laminate is removed before or after imagewise exposure. The laminates, used as dry film resists, have high resolution, excellent edge fusing properties, and tenting reliability.

IT 25736-86-1DP, Blemmer PE 200, reaction products with hexamethylene diisocyanate 39420-45-6DP, Blemmer PP 1000, reaction products with hexamethylene diisocyanate

RL: PEP (Physical, engineering or chemical process); PNU

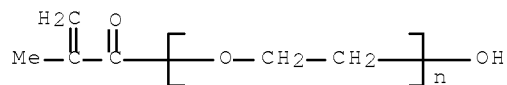
(Preparation, unclassified); TEM (Technical or engineered material)



use); PREP (Preparation); PROC (Process); USES (Uses)  
 (photosensitive polymer compns. for dry-film  
 resists having high resolution and tenting reliability and manufacture of  
 printed circuits)

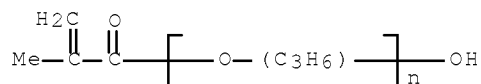
RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)-  
 $\omega$ -hydroxy- (CA INDEX NAME)



RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
 NAME)



IC ICM G03F007-027

ICS G03F007-004; H05K003-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 76

ST dry film resist printed circuit manuf; acrylate terminated polyester  
 polyurethane photosensitive compn

IT Photoresists

(dry-film; photosensitive polymer compns. for dry-film  
 resists having high resolution and tenting reliability and manufacture of  
 printed circuits)

IT Printed circuit boards

(photosensitive polymer compns. for dry-film resists  
 having high resolution and tenting reliability and manufacture of printed  
 circuits)

IT Polyurethanes, processes

RL: PEP (Physical, engineering or chemical process); PNU  
 (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (polyester-, acrylate-terminated; photosensitive polymer  
 compns. for dry-film resists having high resolution and  
 tenting reliability and manufacture of printed circuits)

IT Polyurethanes, processes

RL: PEP (Physical, engineering or chemical process); PNU  
 (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (polyester-polyoxyalkylene-, block, acrylate-terminated;  
 photosensitive polymer compns. for dry-film resists  
 having high resolution and tenting reliability and manufacture of printed  
 circuits)

IT 90-94-8 119-61-9, Benzophenone, processes 1707-68-2,  
 2-(o-Chlorophenyl)-4,5-diphenyl imidazolyl dimer

RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(photoinitiator; photosensitive polymer compns. for dry-film resists having high resolution and tenting reliability and manufacture of printed circuits)

IT 818-61-1DP, reaction products with polyurethanes 822-06-0DP, Hexamethylene diisocyanate, reaction products with polyoxyalkylene monomethacrylate 25736-86-1DP, Blemmer PE 200, reaction products with hexamethylene diisocyanate 36671-24-6DP, Adipic acid-ethylene glycol-m-xylylene diisocyanate polymer, reaction products with hydroxyethyl acrylate 39420-45-6DP, Blemmer PP 1000, reaction products with hexamethylene diisocyanate 232927-51-4DP, Adipic acid-1,4-butanediol-ethylene oxide-isophorone diisocyanate-propylene oxide block copolymer, reaction products with hydroxyethyl acrylate

RL: PEP (Physical, engineering or chemical process); PNU

(Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(photosensitive polymer compns. for dry-film resists having high resolution and tenting reliability and manufacture of printed circuits)

IT 15625-89-5, Trimethylolpropane triacrylate 25035-69-2, n-Butyl acrylate-methacrylic acid-methyl methacrylate copolymer 29763-27-7, Acrylonitrile-methacrylic acid-methyl methacrylate copolymer 57491-53-9, Nonaethylene glycol diacrylate 75577-70-7

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photosensitive polymer compns. for dry-film resists having high resolution and tenting reliability and manufacture of printed circuits)

L46 ANSWER 27 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:144640 HCAPLUS Full-text

DOCUMENT NUMBER: 132:173437

TITLE: Photosensitive resin composition  
useful in fabricating flexographic printing  
plate

INVENTOR(S): Leach, Douglas

PATENT ASSIGNEE(S): Macdermid Incorporated, USA

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 982629	A1	20000301	EP 1999-305585	199907 14
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EP 982629	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6214522	B1	20010410	US 1998-143427	199808 28
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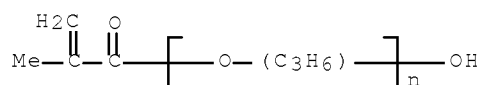
ES 2207912	T3	20040601	ES 1999-305585	199907 14
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JP 2000075481	A	20000314	JP 1999-225900	199908 10
			<--	
JP 3354117	B2	20021209		
US 6197459	B1	20010306	US 2000-620884	200007 21
			<--	
CN 1347929	A	20020508	CN 2000-129670	200010 10
			<--	
PRIORITY APPLN. INFO.:			US 1998-143427	A 199808 28
			<--	

AB A photosensitive resin composition useful in fabricating a flexog. printing plate comprises (i) a polyurethane prepolymer which is the reaction product of at least one polyether diol having an olefin unsatn. equal to or less than 0.01 meq/gm, at least one diisocyanate, and a hydroxy-functionalized (meth)acrylate, (ii) at least one monomer, and (iii) at least one photoinitiator.

IT 39420-45-6, Polypropylene glycol monomethacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive resin compns. for flexog.  
 printing plate preparation containing methacrylates, polyurethane  
 prepolymers and)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
 NAME)



IC ICM G03F007-027  
 ICS B41M001-04

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)

ST photosensitive resin compn polyurethane prepolymer flexog  
 printing plate

IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acrylates; photosensitive resin compns. for flexog.  
 printing plate preparation containing methacrylates and)

IT Flexographic printing plates  
 (photosensitive resin compns. containing methacrylates and  
 polyurethane prepolymers for preparation of)

IT 105-16-8 105-59-9 109-17-1, Tetraethylene glycol dimethacrylate  
 119-61-9, Benzophenone, uses 142-90-5 544-63-8, Tetradecanoic  
 acid, uses 3290-92-4 24650-42-8, Irgacure 651 39420-45-6

, Polypropylene glycol monomethacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for flexog.  
printing plate preparation containing methacrylates, polyurethane  
prepolymers and)

IT 258872-53-6P, Acclaim 3205-polypropylene glycol  
monomethacrylate-toluene diisocyanate copolymer 258872-54-7P,  
Acclaim 2220-polypropylene glycol monomethacrylate-toluene  
diisocyanate copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(preparation and use in photosensitive resin compns. for  
flexog. printing plate preparation)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L46 ANSWER 28 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:56342 HCAPLUS Full-text

DOCUMENT NUMBER: 130:117368

TITLE: Photosensitive resin composition for  
fabricating printing plate resistant to polar  
solvent-based ink

INVENTOR(S): Pohl, Rudolph

PATENT ASSIGNEE(S): MacDermid, Incorporated, USA

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5861234	A	19990119	US 1997-790492	199701 29

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PRIORITY APPLN. INFO.: US 1997-790492

199701  
29

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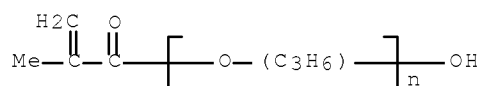
AB The addition of a vinyl ether to a photosensitive resin compn. is suggested  
to improve the resistance of the cured resin composition obtained from the  
photosensitive resin compn. to polar solvents. A long-chain vinyl ether such  
as octadecyl vinyl ether or dodecyl vinyl ether is preferred. The resulting  
photosensitive resin is particularly useful in the fabrication of a printing  
plate resistant to a polar solvent-based ink.

IT 39420-45-6D, Polypropylene glycol monomethacrylate, reaction  
products with isocyanate-terminated polyurethanes

RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for printing  
plate preparation containing vinyl ethers and)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
NAME)



IC ICM G03F007-26  
ICS G03F007-30  
INCL 430300000  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyether-; photosensitive resin compns. for printing plate preparation containing vinyl ethers and)  
IT Printing plates  
(resistant to polar solvent-based inks and prepared from photosensitive resin compns. containing unsatd. polyurethanes and vinyl ethers)  
IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(unsatd.; photosensitive resin compns. for printing plate preparation containing vinyl ethers and)  
IT 765-14-0, Dodecyl vinyl ether 930-02-9, Octadecyl vinyl ether  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for printing plate preparation containing unsatd. polyurethanes and)  
IT 143-07-7, Dodecanoic acid, uses 544-63-8, Tetradecanoic acid, uses 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for printing plate preparation containing unsatd. polyurethanes, ethylenically unsatd. monomers, vinyl ethers and)  
IT 142-90-5, Lauryl methacrylate 3290-92-4 7534-94-3, Isobornyl methacrylate 29964-84-9, Isodecyl methacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for printing plate preparation containing unsatd. polyurethanes, vinyl ethers and)  
IT 584-84-9D, 2,4-TDI, polymers with hydroxy-terminated polybutadiene, reaction products with polypropylene glycol monomethacrylate 9003-17-2D, Polybutadiene, hydroxy-terminated, polymers with TDI, reaction products with polypropylene glycol monomethacrylate 39420-45-6D, Polypropylene glycol monomethacrylate, reaction products with isocyanate-terminated polyurethanes 219713-38-9, Merigraph F 025-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for printing plate preparation containing vinyl ethers and)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 29 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1997:600717 HCAPLUS Full-text  
DOCUMENT NUMBER: 127:270500  
ORIGINAL REFERENCE NO.: 127:52661a, 52664a  
TITLE: Photopolymerizable composition for photosensitive lithographic printing plate  
INVENTOR(S): Tsuji, Shigeo; Okamoto, Hideaki  
PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan

November 26, 2008

10/577,255

70

SOURCE: Eur. Pat. Appl., 22 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 793145	A1	19970903	EP 1997-103156	199702 26
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EP 793145	B1	20010124		
R: DE, FR, GB, NL				
JP 10010719	A	19980116	JP 1996-265947	199610 07
<--				
JP 3255042	B2	20020212		
US 5800965	A	19980901	US 1996-772569	199612 26
<--				
PRIORITY APPLN. INFO.:			JP 1996-43259	A 199602 29
<--				
			JP 1996-102476	A 199604 24

AB A photopolymerizable composition for a photosensitive lithog. printing plate is provided comprising (A) addition-polymerizable ethylenically unsatd. bond-containing monomers, (B) a photopolymn. initiator system, and (C) a polymer binder having carboxyl groups in its mol., wherein the addition-polymerizable ethylenically unsatd. bond-containing monomers (A) contain a specific monomer which is a phosphoric acid ester compound having at least one (meth)acryloyl group and/or a compound of the formula  $\text{CH}_2=\text{C}[\text{CO}_2(\text{XO})\text{mH}]\text{R}$  wherein R1 is a hydrogen atom or a Me group, X is a C1-6 alkylene group which may be branched and may be substituted by halogen, and m is an integer of at least 2 and the polymer binder (C) having carboxyl groups in its mol. is a compound having at least a part of the carboxyl groups reacted with an alicyclic epoxy group-containing unsatd. compound

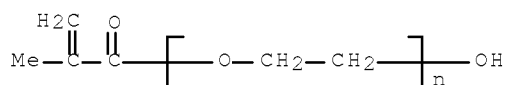
IT 25736-86-1

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(presensitized lithog. plate preparation using photopolymerizable compns. containing)

RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-027  
ICS G03F007-033  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST photopolymerizable compns presensitized lithog plate  
IT Lithographic plates  
(presensitized; photopolymerizable compns. for)  
IT 77001-81-1, UA 306H  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(oligomeric; presensitized lithog. plate preparation using photopolymerizable compns. containing)  
IT 24599-21-1 25736-86-1 32435-46-4 56361-55-8, A BPE 4  
125051-32-3 162461-65-6 163859-22-1 196296-02-3 196296-03-4  
196296-04-5  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(presensitized lithog. plate preparation using photopolymerizable compns. containing)

L46 ANSWER 30 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1997:113405 HCAPLUS Full-text  
DOCUMENT NUMBER: 126:118569  
ORIGINAL REFERENCE NO.: 126:22893a,22896a  
TITLE: Thiol-containing photosensitive polyurethane foam compositions  
INVENTOR(S): Tsao, Jung Hsien  
PATENT ASSIGNEE(S): Pt Sub, Inc., USA  
SOURCE: PCT Int. Appl., 35 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640528	A1	19961219	WO 1996-US963	19960124

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W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9647055	A	19961230	AU 1996-47055	19960124

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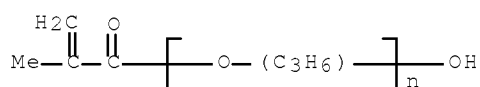
PRIORITY APPLN. INFO.:	US 1995-473444	A	19950607
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WO 1996-US963	W	19960124
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- AB A photosensitive resin composition comprises (1) 100 parts of a urethane prepolymer comprising a plurality of diol segments linked through a urethane linkage and having an addition polymerizable ethylenic group at both terminals, (2) 1-50 parts of a thiol, (3) 5-80 parts of a reactive diluent, and 0.1-5 parts of a photoinitiator and/or photosensitizer. The composition is used to produce foam sheets for printing blankets and printing plates. A polyurethane prepolymer was prepared by the reaction of polytetramethylene glycol, ethylene oxide-propylene oxide block copolymer, Desmodur W, hydroxyethyl acrylate, and hydroxyethyl methacrylate. The prepolymer then was mixed with hydroxyethyl methacrylate, polypropylene glycol monomethacrylate, diethylene glycol dimethacrylate, trimethylolpropane tris( $\beta$ -mercaptopropionate), and Darocur 1173 to give a photosensitive composition, which was frothed mech., coated on a polyester baking, and cured by UV irradiation to give a foam sheet.
- IT 39420-45-6, Polypropylene glycol monomethacrylate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (reactive diluent; thiol-containing photosensitive polyurethane foam compns.)
- RN 39420-45-6 HCAPLUS
- CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



- IC ICM B41N001-00  
 ICS B41N003-00; B41N003-03; B41N003-04; B41N003-08; B32B003-12; B32B003-26; B32B007-00; B32B009-04; C08L075-00; C08L075-16
- CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 74
- IT Household furnishings  
 (blankets; thiol-containing photosensitive polyurethane foam compns. for printing blanket)
- IT Printing plates  
 (compressible; thiol-containing photosensitive polyurethane foam compns. for printing plates)
- IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-, acrylic, cellular; laminates containing foams made from thiol-containing photosensitive polyurethane compns. for printing blankets and plates)
- IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-, ethylenic group-terminated; thiol-containing photosensitive polyurethane foam compns.)
- IT Polyesters, uses  
 Polyesters, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (support films; laminates containing foams made from thiol-containing



- photosensitive polyurethane compns. for printing  
blankets and plates)
- IT Thiols (organic), uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(thiol-containing photosensitive polyurethane foam compns.)
- IT Printing apparatus  
(thiol-containing photosensitive polyurethane foam compns. for printing blanket)
- IT 186255-98-1P 186256-00-8P 186256-03-1P 186256-04-2P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(cellular; laminates containing foams made from thiol-containing photosensitive polyurethane compns. for printing blankets and plates)
- IT 7473-98-5, Darocur 1173  
RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; thiol-containing photosensitive polyurethane foam compns.)
- IT 868-77-9 2358-84-1, Diethylene glycol dimethacrylate  
39420-45-6, Polypropylene glycol monomethacrylate  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(reactive diluent; thiol-containing photosensitive polyurethane foam compns.)
- IT 25038-59-9, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(support films; laminates containing foams made from thiol-containing photosensitive polyurethane compns. for printing blankets and plates)
- IT 818-61-1DP, reaction products with isocyanato group-terminated polyurethanes 868-77-9DP, reaction products with isocyanato group-terminated polyurethanes 60857-76-3DP, reaction products with hydroxy-containing (meth)acrylates 181895-37-4DP, reaction products with hydroxy-containing (meth)acrylates 186255-94-7DP, reaction products with hydroxy-containing (meth)acrylates 186255-96-9DP, reaction products with hydroxy-containing (meth)acrylates  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(thiol-containing photosensitive polyurethane foam compns.)
- IT 7575-23-7, Pentaerythritol tetrakis( $\beta$ -mercaptopropionate)  
33007-83-9, Trimethylolpropane tris( $\beta$ -mercaptopropionate)  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(thiol-containing photosensitive polyurethane foam compns.)

L46 ANSWER 31 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:530850 HCAPLUS Full-text

DOCUMENT NUMBER: 125:181399

ORIGINAL REFERENCE NO.: 125:33721a,33724a

TITLE: Photopolymerizable composition,  
presensitized lithographic plate using it, and  
its development with organic solvent-free  
developer

INVENTOR(S): Ishii, Nobuyuki; Kizu, Noryuki; Matsumura,  
Tomoyuki; Murata, Masahisa; Tsuji, Shigeo

PATENT ASSIGNEE(S): Konishiroku Photo Ind, Japan; Mitsubishi  
Chemical Corp.

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08146606	A	19960607	JP 1994-304199	19941115

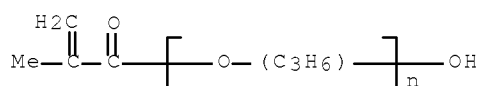
PRIORITY APPLN. INFO.: JP 1994-304199  
 19941115

AB The composition contains a linear polymer with a repeating unit terminated with an addition-polymerizable unsatd. linkage, a photopolymn. initiator, and an alkali-soluble polymer. The lithog. plate comprises a support with a hydrophilic surface. The lithog. plate is developed with an organic solvent-free developer. The lithog. plate showed good ink receptivity.

IT 39420-45-6, Blemmer PP 500  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-038  
 ICS G03F007-00; G03F007-021; G03F007-027; G03F007-028; G03F007-30

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photopolymerizable compn presensitized lithog plate;  
 printing plate photosensitive lithog development; solvent org free development lithog plate

IT Lithographic plates  
 (presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

IT Resists  
 (photo-, presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

IT 82799-44-8, 2,4-Diethylthioxanthone  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (photopolymn. initiator; presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

IT 125785-09-3P 180483-43-6P, Acrylonitrile-ethyl acrylate-ethyl methacrylate-N-(4-hydroxyphenyl)methacrylamide-methacrylic acid copolymer  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

IT 15625-89-5, Trimethylolpropane triacrylate 39420-45-6, Blemmer PP 500 123938-67-0, AS 6 123997-17-1, AB 6  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

IT 7429-90-5, Aluminum, uses  
 RL: DEV (Device component use); USES (Uses)  
 (support; presensitized lithog. plate containing photopolymerizable composition developed with organic solvent-free developer)

L46 ANSWER 32 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:509458 HCAPLUS Full-text

DOCUMENT NUMBER: 125:154424

ORIGINAL REFERENCE NO.: 125:28675a, 28678a

TITLE: Photosensitive compositions and clean running photopolymer printing plates therefrom

INVENTOR(S): Leach, Douglas R.

PATENT ASSIGNEE(S): Hercules Inc., USA

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9618932	A1	19960620	WO 1995-US15902	19951206
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W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2207591	A1	19960620	CA 1995-2207591	19951206
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AU 9643762	A	19960703	AU 1996-43762	19951206
<--				
EP 797791	A1	19971001	EP 1995-942581	19951206
<--				

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE

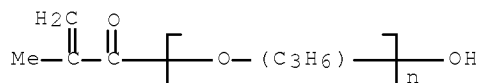
JP 10513269	T	19981215	JP 1995-519150	199512 06
			<--	
ZA 9510611	A	19960613	ZA 1995-10611	199512 13
			<--	
US 6399278	B1	20020604	US 1996-664318	199606 10
			<--	
US 6403269	B1	20020611	US 1996-733890	199610 18
			<--	
PRIORITY APPLN. INFO.:			US 1994-355122	A 199412 13
			<--	
			US 1995-475703	B1 199506 07
			<--	
			WO 1995-US15902	W 199512 06
			<--	

AB Clean running printing plates for flexog. printing may be prepared by the cophotopolymn. of a mixture comprising a liquid, acrylate- or methacrylate-terminated polyurethane oligomer, an ethylenically unsatd. compound, and a photopolymn. initiator. The liquid oligomer is preferably the acrylated or methacrylated reaction product of a diisocyanate, a liquid hydrophobic polyalkylene oxide, and a diol that is at least one of polypropylene oxide and a copolymer of ethylene oxide and propylene oxide, where reaction with a hydroxy-containing acrylate or methacrylate compound incorporates terminal acrylate or methacrylate groups into the oligomer. The photopolymerizable blend may be used to form printing plates for flexog. printing, where the plates have a reduced tendency to pick up paper fibers, dust and dried ink during the printing process. Methodol. for preparing the printing plates and printing with the printing plates of the invention are also disclosed.

IT 39420-45-6, Polypropylene glycol monomethacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(flexog. printing plate preparation using photosensitive  
compos. containing urethane oligomers and)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
NAME)



IC ICM G03F007-028  
ICS G03F007-30; B41M001-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive compns flexog printing plate

IT Urethane polymers  
RL: TEM (Technical or engineered material use); USES (Uses)  
(oligomers; flexog. printing plate manufacture using photosensitive compns. containing)

IT Printing plates  
(flexog., photosensitive compns. containing urethane oligomers for manufacture of)

IT 180151-66-0 180151-67-1 180151-68-2 180151-69-3 180308-81-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(flexog. printing plate preparation using photosensitive compns. containing)

IT 109-17-1 123-28-4 142-90-5, Lauryl methacrylate 301-02-0, Oleamide 544-63-8, Tetradecanoic acid, uses 3290-92-4, Trimethylolpropane trimethacrylate 16545-54-3, Dimyristyl thiodipropionate 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 39420-45-6, Polypropylene glycol monomethacrylate 53879-54-2 56641-05-5, Photomer 4039  
RL: TEM (Technical or engineered material use); USES (Uses)  
(flexog. printing plate preparation using photosensitive compns. containing urethane oligomers and)

L46 ANSWER 33 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:994828 HCAPLUS Full-text

DOCUMENT NUMBER: 124:71644

ORIGINAL REFERENCE NO.: 124:13137a,13140a

TITLE: Liquid photosensitive resin composition  
for forming relief structures

INVENTOR(S): Tomita, Hiroaki; Kobayashi, Takashi; Sakata, Norihiko

PATENT ASSIGNEE(S): Asahi Kasei Kogyo Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9523998	A1	19950908	WO 1995-JP354	199503 03
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W: AU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9518615	A	19950918	AU 1995-18615	199503 03
<--				
AU 684151	B2	19971204		
JP 07295218	A	19951110	JP 1995-68900	199503

03

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JP 3508788                      B2      20040322  
 EP 750229                      A1      19961227      EP 1995-910745

199503  
03

<--

EP 750229                      B1      19991006  
       R: BE, DE, ES, FR, GB, IT  
 ES 2136838                      T3      19991201      ES 1995-910745

199503  
03

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US 5843622                      A      19981201      US 1996-702537

199609  
04

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PRIORITY APPLN. INFO.:                      JP 1994-58378      A

199403  
04

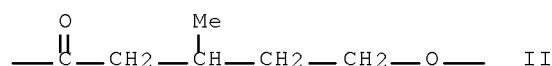
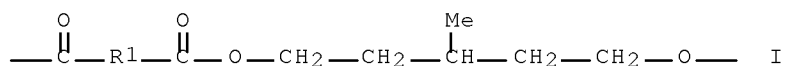
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WO 1995-JP354      W

199503  
03

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GI



AB    The title resin composition comprises an unsatd. polyesterpolyetherpolyurethane prepolymer, an ethylenically unsatd. monomer and a photopolymn. initiator, in which the prepolymer has weight ratio of the polyester diol segments to the polyether diol segments range from 1:3 to 4:1 and the polyester diol segments each independently comprises repeating units I (R1 represents a divalent aliphatic or aromatic group) or (II). A relief structure (e.g. a press plate) produced from the composition scarcely causes tunneling of the relief and has an improved durability.

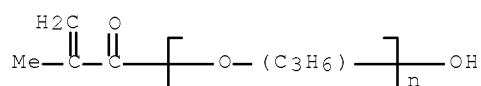
IT    9019-16-3DF, reaction product with polyurethane-polyester-polyether  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
       (prepared for liquid photosensitive resin composition)

RN    9019-16-3    HCAPLUS

CN    Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -hydroxy-, homopolymer  
 (9CI)    (CA INDEX NAME)

CM    1

CRN 39420-45-6  
 CMF (C3 H6 O)<sub>n</sub> C4 H6 O2  
 CCI IDS, PMS



IC ICM G03F007-027  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST liq photosensitive compo polyester polyether polyurethane  
 IT Printing plates  
 (flexog., liquid photosensitive resin composition for manufacture of)  
 IT Urethane polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyester-polyether-, for liquid photosensitive resin composition for forming relief structure)  
 IT 109-17-1, Tetraethylene glycol dimethacrylate 142-90-5, Lauryl methacrylate 45219-55-4 62722-22-9 117646-83-0, Diethylene glycol-2-ethylhexylether acrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (contained in liquid photosensitive resin composition)  
 IT 9019-16-3DP, reaction product with polyurethane-polyester-polyether 25322-68-3DP, Polyethylene glycol, polymer with other polyoxyalkylene glycol and diol and diisocyanate, reaction product with poly(oxypropylene) glycol monomethacrylate 25322-69-4DP, Polypropylene glycol, polymer with other polyoxyalkylene glycol and diol and diisocyanate, reaction product with poly(oxypropylene) glycol monomethacrylate 26471-62-5DP, Tolylenediisocyanate, polymer with polyoxyalkylene glycol and diol, reaction product with poly(oxypropylene) glycol monomethacrylate 58991-77-8DP, polymer with polyoxyalkylene glycol and diisocyanate, reaction product with poly(oxypropylene) glycol monomethacrylate 97145-14-7DP, Poly( $\beta$ -methyl- $\delta$ -valerolactone), polymer with polyoxyalkylene glycol and diisocyanate, reaction product with poly(oxypropylene) glycol monomethacrylate  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepared for liquid photosensitive resin composition)

L46 ANSWER 34 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:746497 HCAPLUS Full-text

DOCUMENT NUMBER: 123:213334

ORIGINAL REFERENCE NO.: 123:37737a, 37740a

TITLE: Water-developable photosensitive resin compositions

INVENTOR(S): Koshimura, Katsuo; Nishioka, Takashi; Sato, Hozumi

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07140655	A	19950602	JP 1993-248630	19930909

PRIORITY APPLN. INFO.:

JP 1993-248630

19930909

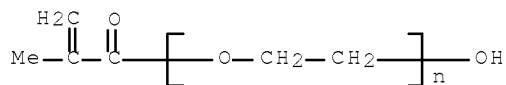
AB The resin compns. contain (A) 100 parts granular copolymer (a) obtained by emulsion-polymerization or suspension-polymerization of a monomer mixture containing (1) aliphatic conjugated diene monomers 10-95, (2)  $\alpha,\beta$ -ethylenic unsatd. carboxylic acids 0.1-30, (3) compds. having  $\geq 2$  addition-polymerizable group 0.1-20, (4) monovinyl monomers having  $\text{NH}_2$  group 0.1-30, and (5) other copolymerizable monomers 0-30 mol.% at the total of (1), (2), (3), (4), and (5) 100 mol.%, (B) 5-100 parts photopolymerizable unsatd. monomers, and (C) 0.1-20 parts photopolymn. initiators. Also claimed are resin compns. which contains (A) 100 parts blend containing granular copolymer (b) obtained by emulsion-polymerization or suspension-polymerization of a monomer mixture containing (1) 10-95, (2) 0.1-30, (3) 0.1-20, and (5) 0-30 mol.% and granular copolymer (c) obtained by emulsion-polymerization or suspension-polymerization of a monomer mixture containing (1) 10-95, (3) 0.1-20, (4) 0.1-30, and (5) 0-30 mol.% at (b)/(c) ratio 95/5-5/95, (B) 5-100 parts photopolymerizable unsatd. monomers, and (C) 0.1-20 parts photopolymn. initiators. The compns. provide photocured products with high mech. strength and are useful for printing plates, photoresists, printing inks, photosensitive paints, photosensitive adhesives, photomolding materials, etc.

IT 25736-86-1

RL: TEM (Technical or engineered material use); USES (Uses)  
 (water-developable photosensitive resin compns  
 . providing resists with high mech. strength and resilience)

RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)-  
 $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-038

ICS G03F007-027; H01L021-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST water developable resist polymer compn

IT Resists

(photo-, water-developable photosensitive resin compns.  
 providing resists with high mech. strength and resilience)

IT Lithographic plates

(presensitized, water-developable photosensitive resin  
 compns. providing resists with high mech. strength and  
 resilience)



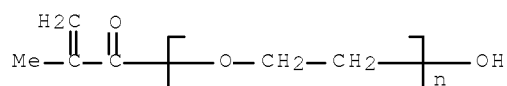
IT 114465-17-7P 165956-57-0P 168091-81-4P 168091-82-5P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(water-developable photosensitive resin compns.  
providing resists with high mech. strength and resilience)  
IT 142-90-5, Lauryl methacrylate 3290-92-4, Trimethylolpropane  
trimethacrylate 3845-76-9, N,N-Dimethylaminopropylacrylamide  
13048-33-4 25736-86-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-developable photosensitive resin compns  
. providing resists with high mech. strength and resilience)

L46 ANSWER 35 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1995:360861 HCAPLUS Full-text  
DOCUMENT NUMBER: 122:201459  
ORIGINAL REFERENCE NO.: 122:36563a,36566a  
TITLE: Unsaturated group-containing polycarboxylic acid  
resin, resin composition containing  
it, and resin composition for color  
filter  
INVENTOR(S): Kato, Yoshinori; Kano, Hirokazu; Ichinose, Naoko  
PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06332177	A	19941202	JP 1993-145371	199305 26

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PRIORITY APPLN. INFO.: JP 1993-145371  
199305  
26

<--  
AB The polycarboxylic acid resin is maleic anhydride- $\geq 1$  monomer copolymer whose  
maleic anhydride parts are half-esterified with  $\text{HO}[\text{CH}_2\text{C}(\text{CH}_2\text{OX})_2\text{CH}_2\text{O}]_n\text{X}$  [ $\text{X}$  =  
(meth)acryloyl;  $n = 1, 2$ ] and  $\text{HO}(\text{C}_2\text{H}_4\text{O})_n\text{R}$  ( $\text{R}$  = alkyl, alkylphenyl, alkanoyl,  
methacryloyl;  $n \geq 2$ ). The  $\geq 1$  monomer may be styrene,  $\alpha$ -methylstyrene,  
isobutylene, (meth)acrylic acid alkyl ester, and/or benzyl (meth)acrylate.  
The resin composition contains the polycarboxylic acid resin optionally  
containing a pigment for the manufacture of color filters. The composition  
gave high-resolution images.  
IT 25736-86-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification with maleic anhydride-styrene copolymer; unsat.  
group-containing polycarboxylic acid resin and photosensitive  
resin composition for color filter)  
RN 25736-86-1 HCAPLUS  
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)-  
 $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-038  
ICS G02B005-20; G03F007-004; H05K003-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

IT Optical filters  
(unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

IT Carbon black, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

IT Resists  
(photo-, unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

IT 3524-68-3 25736-86-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification with maleic anhydride-styrene copolymer; unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

IT 161817-72-7  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

IT 147-14-8, C.I. Pigment Blue 15 4051-63-2, C.I. Pigment Red 177 5567-15-7, C.I. Pigment Yellow 83 14302-13-7, C.I. Pigment Green 36 215247-95-3, C.I. Pigment Violet 23  
RL: TEM (Technical or engineered material use); USES (Uses)  
(unsat. group-containing polycarboxylic acid resin and photosensitive resin composition for color filter)

L46 ANSWER 36 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:302729 HCAPLUS Full-text

DOCUMENT NUMBER: 122:68317

ORIGINAL REFERENCE NO.: 122:12831a,12834a

TITLE: Water-developable photosensitive resin composition useful for manufacturing resists, inks, and printing plates

INVENTOR(S): Tanabe, Takashi; Sato, Hozumi

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06118645	A	19940428	JP 1992-287164	19921002

PRIORITY APPLN. INFO.:

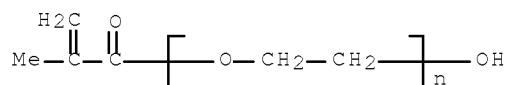
<--  
JP 1992-287164199210  
02

<--  
AB The title composition comprises (1) a diene polymer containing COOH, (2) a photopolymerizable unsatd. monomer, (3) a photopolymn. initiator, and (4)  $\geq 1$  compound selected from thiourea, a thiourea derivative containing an N-aminoalkyl, and a thiourea derivative containing a heterocyclyl. The composition exhibited excellent developability even after a long storage.

IT 25736-86-1  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(water-developable photosensitive resin compn  
.)

RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-038  
ICS C08F279-02; C09D004-00; C09D011-10; C09J004-00; C09J113-00;  
G03F007-004; G03F007-027; G03F007-028

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 42

ST water developable photosensitive resin compn; diene polymer photosensitive resin compn; thiourea deriv photosensitive resin compn

IT Printing plates  
(water-developable photosensitive resin composition)

IT Photoimaging compositions and processes  
(water-developable resin composition)

IT Resists  
(photo-, water-developable photosensitive resin composition)

IT Inks  
(printing, water-developable photosensitive resin compn  
.)

IT 62-56-6, Thiourea, uses 96-45-7, Ethylene thiourea 583-39-1, 2-Mercaptobenzimidazole 3290-92-4, Trimethylolpropane trimethacrylate 3845-76-9 18884-15-6 24650-42-8  
25736-86-1 114465-17-7  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(water-developable photosensitive resin compn  
.)

L46 ANSWER 37 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1995:169571 HCAPLUS Full-text  
DOCUMENT NUMBER: 122:68341  
ORIGINAL REFERENCE NO.: 122:12838h,12839a  
TITLE: Photosensitive resin composition  
INVENTOR(S): Koshimura, Katsuo; Tanabe, Takayoshi; Sato,

PATENT ASSIGNEE(S): Hozumi; Ooshima, Noboru; Nishioka, Takashi  
 SOURCE: Japan Synthetic Rubber Co Ltd, Japan  
 Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06208225	A	19940726	JP 1993-267725	19931001
JP 3240781	B2	20011225		
EP 675412	A1	19951004	EP 1994-302283	19940330
EP 675412	B1	20010117		
R: DE, GB, IT			JP 1993-267725	19931001
PRIORITY APPLN. INFO.:				

AB The composition comprises (1) a carboxy group-containing diene polymer, (2) a hydrogenated diene polymer containing aliphatic conjugated diene repeating units and in which ≥80% of the double bonds are hydrogenated, (3) photopolymerizable unsatd. monomer(s), (4) a amino group-containing compound, and (5) a photopolymn. initiator. The compound can be developed with water, swelling is prevented, and the compound is useful for photoresists, printing plates, and inks.

IT 25249-16-5, Polyethyleneglycol monomethacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition containing diene polymer and amino compound)

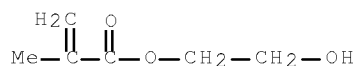
RN 25249-16-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, homopolymer (CA  
 INDEX NAME)

CM 1

CRN 868-77-9

CMF C6 H10 O3



IC ICM G03F007-038

ICS C08L053-02; C09D004-00; C09J004-00; C09J113-00; G03F007-028

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive resin compn diene; amine compd resist

IT Resists  
 (photo-, photosensitive composition containing diene polymer and

amino compound)  
 IT 6956-56-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (photopolymer. initiator; photosensitive composition containing  
 diene polymer and amino compound)  
 IT 3290-92-4, Trimethylolpropane trimethacrylate 3845-76-9,  
 N,N-Dimethylaminopropylacrylamide 9003-17-2D, Polybutadiene,  
 hydrogenated 25249-16-5, Polyethyleneglycol  
 monomethacrylate 100601-84-1 106107-54-4D, Butadiene-styrene  
 block copolymer, hydrogenated 114465-17-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition containing diene polymer  
 and amino compound)

L46 ANSWER 38 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1994:334935 HCAPLUS Full-text  
 DOCUMENT NUMBER: 120:334935  
 ORIGINAL REFERENCE NO.: 120:58681a,58684a  
 TITLE: Photosensitive resin composition  
 useful for resist  
 INVENTOR(S): Hagio, Shigeru; Kohda, Kazuhiko; Uehara,  
 Shinichi  
 PATENT ASSIGNEE(S): San Nopco Ltd., Japan; Ibiden Co., Ltd.  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9306529	A1	19930401	WO 1992-JP1166	199209 11
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W: DE, US JP 05072735	A	19930326	JP 1991-262701	199109 14
			<--	
JP 06083052	A	19940325	JP 1991-262703	199109 14
			<--	
JP 06095379	A	19940408	JP 1991-262704	199109 14
			<--	
DE 4293400	T0	19931007	DE 1992-4293400	199209 11
			<--	
PRIORITY APPLN. INFO.:			JP 1991-262701	A 199109 14
			<--	
			JP 1991-262703	A 199109

14

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JP 1991-262704

A

199109

14

&lt;--

WO 1992-JP1166

W

199209

11

&lt;--

AB A photosensitive resin composition which is developed by an aqueous alkali solution and has excellent sensitivity, resolution and resistance against electroless plating solution, comprising a graft polymer having, as branch polymers, a polymer of a monomer that has hydrophilic groups, and a binder polymer which is soluble or swellable in an aqueous alkali solution and is capable of forming a film. The composition comprises a graft polymer which has, as branch polymers, a polymer of a monomer that has hydrophilic groups, a binder polymer which is soluble or swellable in an aqueous alkali solution, an ethylenically unsatd. compound, and a photopolymn. initiator.

IT 117650-87-0P, 2-Hydroxyethyl methacrylatemethyl methacrylate graft copolymer

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and use of, photosensitive resin compn  
. from)

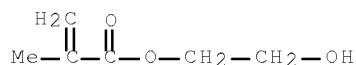
RN 117650-87-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

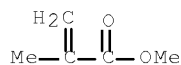
CMF C6 H10 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

ST photosensitive resin compn resist

IT Phenolic resins, uses

RL: USES (Uses)

(epoxy, novolak, photosensitive resin composition from)

IT Epoxy resins, uses

RL: USES (Uses)

(phenolic, novolak, photosensitive resin composition from)

IT Resists  
(photo-, resin composition for)

IT 2760-98-7 15625-89-5 17831-71-9 24979-70-2, Maruka Lyncur M-S  
3 25035-69-2, Butyl acrylate-methacrylic acidmethyl methacrylate  
copolymer 26300-51-6, Acrylic acidbutyl acrylatemethyl  
methacrylate copolymer 59372-10-0, Butyl acrylate-2-ethylhexyl  
acrylate-methacrylic acidmethyl methacrylate copolymer 63939-13-9,  
Epikote 154 106209-33-0, SMA Resin 1000  
RL: USES (Uses)  
(photosensitive resin composition from)

IT 117650-87-0P, 2-Hydroxyethyl methacrylatemethyl methacrylate  
graft copolymer 131004-72-3P, Butyl methacrylate-2-hydroxyethyl  
methacrylate-methyl methacrylate graft copolymer  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and use of, photosensitive resin compn  
. from)

IT 110224-97-0P, 2-Hydroxyethyl methacrylate-thioglycolic acid telomer  
155646-48-3P, 2-Hydroxyethyl methacrylate-thioglycolic acid telomer  
glycidyl methacrylate  
RL: PREP (Preparation)  
(preparation of, photosensitive resin composition from)

L46 ANSWER 39 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1992:540657 HCAPLUS Full-text  
DOCUMENT NUMBER: 117:140657  
ORIGINAL REFERENCE NO.: 117:24211a,24214a  
TITLE: Photoresist composition  
INVENTOR(S): Matsumura, Akira; Ishikawa, Katsukiyo  
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 6 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 469584	A1	19920205	EP 1991-112888	199107 31
EP 469584	B1	19970305		
R: DE, GB, NL				
JP 04088346	A	19920323	JP 1990-205678	199007 31
PRIORITY APPLN. INFO.:			JP 1990-205678	A 199007 31

AB A photoresist composition, which can be used in forming a pos. or neg. resist pattern having excellent phys. properties, such as chemical resistance, comprises (a) 20-90 weight% of a polymer pendanted with a branched group which is unstable against an acid and present repeatedly, (b) 10-80 weight% of a polymer having a group which is reactive at an elevated temperature with the groups which are produced by the decomposition of the branched groups of the

polymer (a) with an acid, and (c) 0.1-50 weight%, based on (a) and (b), of a photopolymn. initiator which generates an acid in response to photoirradn., wherein the branched group of (a) is a tert-Bu ester group of a carboxylic acid or a tert-Bu carbonate of a phenolic compound and the photoresist composition may further contain a photosensitizer 0.01-10 weight% based on (a) and (b).

IT 129698-93-7

RL: USES (Uses)

(photoresist compns. containing acid-generating photosensitive compds. and)

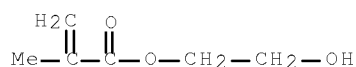
RN 129698-93-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

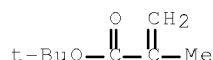
CMF C6 H10 O3



CM 2

CRN 585-07-9

CMF C8 H14 O2



IT 25249-16-5, Poly(2-hydroxyethylmethacrylate)

RL: USES (Uses)

(photoresist compns. containing acid-generating photosensitive compds. and acid-decomposable polymers and)

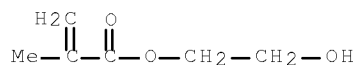
RN 25249-16-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 868-77-9

CMF C6 H10 O3



IC ICM G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and



Other Reprographic Processes)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 62613-15-4

RL: USES (Uses)

(photoresist compns. containing acid-decomposable polymers  
and reactive polymers and)

IT 129698-93-7

RL: USES (Uses)

(photoresist compns. containing acid-generating  
photosensitive compds. and)

IT 25249-16-5, Poly(2-hydroxyethylmethacrylate)

RL: USES (Uses)

(photoresist compns. containing acid-generating  
photosensitive compds. and acid-decomposable polymers  
and)IT 25189-00-8, Poly(tert-butylmethacrylate) 87261-04-9,  
Poly(p-tert-butoxycarbonyloxystyrene)

RL: USES (Uses)

(photoresists compns. containing acid-generating  
photosensitive compds. and reactive polymers and)

L46 ANSWER 40 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:501063 HCAPLUS Full-text

DOCUMENT NUMBER: 117:101063

ORIGINAL REFERENCE NO.: 117:17399a,17402a

TITLE: A photosensitive resin composition for  
use in forming a relief structure

INVENTOR(S): Takahashi, Gensho; Sato, Reijiro

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 427950	A2	19910522	EP 1990-119036	199010 04
			<--	
EP 427950	A3	19911016		
EP 427950	B1	19960717		
R: BE, DE, ES, FR, GB, IT, NL				
JP 03157657	A	19910705	JP 1989-296113	198911 16
			<--	
JP 2644898	B2	19970825		
AU 9062273	A	19910523	AU 1990-62273	199009 07
			<--	
AU 624994	B2	19920625		
ES 2088935	T3	19961001	ES 1990-119036	199010 04
			<--	
US 5336585	A	19940809	US 1992-999578	

199212  
30

PRIORITY APPLN. INFO.:

<--  
JP 1989-296113

A

198911  
16<--  
US 1990-579952

B1

199009  
10

&lt;--

AB A process for producing a photosensitive resin composition for use in forming a relief structure comprises blending the following components: (A) a liquid photosensitive resin component comprising: (a) a urethane prepolymer 100 weight parts comprising a plurality of diol segments linked through a urethane linkage and having an addition-polymerizable ethylenically unsatd. group at both terminals thereof, the diol segments comprising  $\geq 1$  polyoxyalkylene diol segment and  $\geq 1$  saturated polyester diol segment, the urethane prepolymer having a number average mol. weight of from  $2.0 \times 10^3$  to  $3.0 \times 10^4$ , and (b) an addition-polymerizable ethylenically unsatd. monomer 10-200 weight parts; (B) a photopolymerization initiator 0.1-10 wt % of A; (C) a thermal polymerization inhibitor 0.01-5 weight % of A; and (D)  $\geq 1$  unsatd. amine compound  $\text{CH}_2\text{:CR}_1\text{CO}_2\text{ANR}_2\text{R}_3$  0.1-5 weight % of A [ $\text{R}_1 = \text{H, Me}$ ;  $\text{R}_2, \text{R}_3 = \text{alkyl}$ ; A = straight chain or branched alkylene]. The composition gives a photoresin relief structure which not only is characterized with a tunnel-free structure and excellent mech. properties, but also exhibits excellent performances.

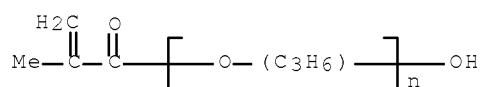
IT 39420-45-6 39420-45-6D, reaction product with urethane polymer

RL: USES (Uses)

(in photosensitive composition for tunnel-free relief structures)

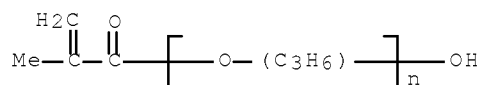
RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive compn urethane amine; relief structure

photoimaging compn; printing plate photoimaging  
compn

IT Urethane polymers, uses

RL: USES (Uses)

(in photosensitive composition for tunnel-free relief  
structures)

IT Printing plates

(relief, tunnel-free structure producing photosensitive  
composition for)

IT 105-16-8, N,N-Diethylaminoethyl methacrylate 109-17-1,  
Tetraethylene glycol dimethacrylate 128-37-0,  
2,6-Di-tert-butyl-p-cresol, properties 142-90-5, Lauryl  
methacrylate 868-77-9, 2-Hydroxyethyl methacrylate 923-26-2,  
2-Hydroxypropyl methacrylate 923-26-2D, 2-Hydroxypropyl  
methacrylate, reaction product with urethane polymer 2439-35-2  
2867-47-2, N,N-Dimethylaminoethyl methacrylate 3290-92-4,  
Trimethylolpropane trimethacrylate 17577-32-1,  
3-N,N-Diethylaminopropyl methacrylate 32360-05-7, Stearyl  
methacrylate 39420-45-6 39420-45-6D, reaction  
product with urethane polymer 54951-50-7 117646-83-0,  
Diethyleneglycol 2-ethylhexyl ether acrylate 142875-48-7D, Adipic  
acid-ethylene oxide-propylene glycol-propylene oxide-toluene  
diisocyanate block copolymer, reaction product with hydroxypropyl  
methacrylate or oxypropylene glycol monomethacrylate 142875-49-8D,  
ε-Caprolactone-hexamethylene diisocyanate-propylene glycol  
block copolymer, reaction product with polyoxypropylene glycol  
monomethacrylate

RL: USES (Uses)

(in photosensitive composition for tunnel-free  
relief structures)

L46 ANSWER 41 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:488297 HCAPLUS Full-text

DOCUMENT NUMBER: 113:88297

ORIGINAL REFERENCE NO.: 113:14723a,14726a

TITLE: Photosensitive resin compositions for  
flexographic plates

INVENTOR(S): Iwanaga, Shinichiro; Matsunaga, Tatsuaki;  
Tanaka, Masaji; Nobuyo, Koji

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 02058059	A	19900227	JP 1988-208002	198808 24
			<--	
PRIORITY APPLN. INFO.:			JP 1988-208002	198808 24
			<--	

AB The title compns. contain conjugated diene copolymer A 50-90, conjugated diene  
copolymer B (with number-average mol. weight 5000-10,000) 10-50 (A+B = 100),

photopolymg. unsatd. monomers 10-200, and photopolymn. initiators 0.1-10 parts; the copolymer A consist of conjugated diene unit a 40-90,  $\alpha,\beta$ -ethylenic acid unit b 0.5-10, polyfunctional vinylic unit c 0.1-5, and monoolefin unit d 0-59.4 mol%, and the copolymer B contains a 30-90, b 0-30, and d 5-70 mol%. These compns. are highly developable with aqueous and alkaline developers and provide flexog. printing plates with high performance. Thus, 100 parts of a 7:3 (solid weight) mixture of copolymer A [84.8:2.0:1.2:12.0 (mol) butadiene-methacrylic acid-ethylene glycol dimethacrylate-Et acrylate copolymer] and copolymer B [81:7:12 (mol) butadiene-methacrylic acid-Et acrylate copolymer, number-average mol. weight 18,000], nonaethylene glycol monoacrylate 10, tetraethylene glycol diacrylate 20, dimethylaminopropylacrylamide 10, trimethylolpropane triacrylate 5, benzoin isopropyl ether 2.0, and 2,6-tert-butylcatechol 0.2 g, were kneaded with heating to obtain the photosensitive composition with good workability. A SBR sheet was coated with a 2-mm-thick layer of this composition, and which layer was imagewise exposed, developed with 40° water, to obtain a flexog printing plate with good elasticity, and the use of this plate for printing showed good ink transfer.

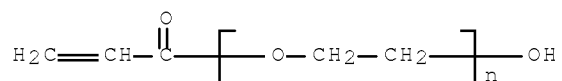
IT 26403-58-7

RL: USES (Uses)

(photosensitive compns. containing, for  
photosensitive flexog. plates)

RN 26403-58-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03F007-033

ICS G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

ST flexog plate photosensitive polymer compn

IT 3845-76-9 15625-89-5 17831-71-9, Tetraethylene glycol diacrylate  
26403-58-7

RL: USES (Uses)

(photosensitive compns. containing, for  
photosensitive flexog. plates)

L46 ANSWER 42 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:467975 HCAPLUS Full-text

DOCUMENT NUMBER: 111:67975

ORIGINAL REFERENCE NO.: 111:11315a,11318a

TITLE: Photosensitive resin compositions

INVENTOR(S): Kawamura, Kiyoshi; Matsuda, Tatsuto; Otsuki, Nobuaki; Sano, Sadanori

PATENT ASSIGNEE(S): Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

November 26, 2008

10/577,255

93

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63234248	A	19880929	JP 1987-67876	198703 24

PRIORITY APPLN. INFO.: <-- JP 1987-67876 198703  
24

AB The title compns. for high-performance lithog. printing plates contain polymers of a (meth)acrylamide monomer of the formula  $\text{CH}_2:\text{CRCON}[(\text{CH}_2\text{CHRO})_l\text{H}](\text{CH}_2\text{CHRO})_m\text{H}$  ( $\text{R} = \text{H}, \text{Me}; l, m = 0-20; l + m 1-20$ ) and/or a HO group-containing (meth) acrylate oligomer of the formula  $\text{CH}_2:\text{CRCO}_2\text{ZO}(\text{CH}_2\text{CHRCO}_2\text{ZO})_n\text{H}$  ( $\text{R} = \text{H}, \text{Me}; \text{Z} = \text{C}2-20$  divalent organic group;  $n = 1-100$ ) and a diazo compound

IT 25249-16-5, 2-Hydroxyethylmethacrylate polymer  
26022-14-0 32029-53-1, 2-Hydroxypropylacrylate polymer

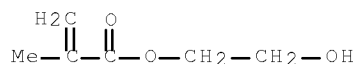
RL: USES (Uses)  
(photosensitive compns. containing, for lithog. plates)

RN 25249-16-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 868-77-9  
CMF C6 H10 O3

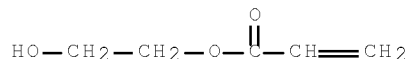


RN 26022-14-0 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 818-61-1  
CMF C5 H8 O3

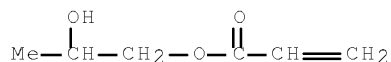


RN 32029-53-1 HCAPLUS

CN 2-Propenoic acid, 2-hydroxypropyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 999-61-1  
CMF C6 H10 O3



IC ICM G03C001-71  
ICS G03C001-68; G03F007-08  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT Lithographic plates  
(photosensitive compas. containing acrylic compds. for fabrication of)  
IT 79-10-7, Acrylic acid, uses and miscellaneous 79-41-4, Methacrylic acid, uses and miscellaneous 80-62-6, Methyl methacrylate 96-33-3, Methyl acrylate 107-13-1, Acrylonitrile, uses and miscellaneous 868-77-9, 2-Hydroxyethylmethacrylate 999-61-1, 2-Hydroxypropylacrylate 1184-84-5, Vinyl sulfonic acid 5238-56-2, N-(2-Hydroxyethyl)methacrylamide 25249-16-5, 2-Hydroxyethylmethacrylate polymer 26022-14-0 32029-53-1, 2-Hydroxypropylacrylate polymer 45011-26-5 99207-50-8  
RL: USES (Uses)  
(photosensitive compas. containing, for lithog. plates)

L46 ANSWER 43 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:467964 HCAPLUS Full-text

DOCUMENT NUMBER: 111:67964

ORIGINAL REFERENCE NO.: 111:11315a, 11318a

TITLE: Photosensitive resin compositions

INVENTOR(S): Minami, Yoshitaka; Kakumaru, Hajime; Kawaguchi, Taku; Tanaka, Yumiko

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

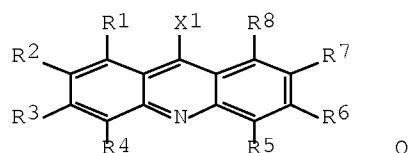
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

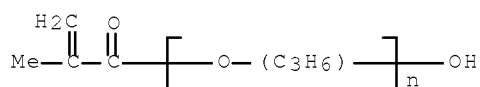
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01048803	A	19890223	JP 1987-206084	19870819
			<--	
JP 2570758	B2	19970116		
PRIORITY APPLN. INFO.:			JP 1987-206084	19870819
			<--	
OTHER SOURCE(S):	MARPAT	111:67964		
GI				



- AB Title compns. with improved sensitivity, useful for formation of precise circuits, comprise thermoplastic polymers, photopolymerizable compds. containing  $\geq 1$  terminal ethylene group, and photopolymn. initiators (weight average mol. weight  $\geq 320$ ) having the acridinyl group I [R1-8 = H, halo, C1-8 alkyl, OMe; X = (un)substituted heterocyclic group conjugated with acridinyl group]. Thus, Ph2NH, p-n-hexylbenzoic acid, and polyphosphoric acid were stirred at 220° for 8 h to give 9-(p-n-hexylphenyl)acridine (II, mol. weight 326). Then, a poly(ethylene terephthalate) film was coated with a composition containing 20:60:20 2-ethylhexyl acrylate-Me methacrylate-methacrylic acid copolymer 157.5, BPE 10 30.0, NK Ester A-TMM 3L 6.0, II 1.0, Leuco Crystal Violet 1.0, tribromomethyl Ph sulfone 1.0, Malachite Green 0.05, and MEK 150 parts and dried at 100° to form a 50- $\mu$ m photosensitive layer, which was covered with a protection film (polyethylene) to obtain a photosensitive film. Then, the film was laminated, after peeling off the protective film, with a Cu-clad laminate, exposed to UV, and developed to obtain a photoresist with good resolution and no dissoln. of solder during etching process.
- IT 39420-45-6D, Blemmer P 1000, reaction products with (hydroxyphenyl)acridine and isophorone diisocyanate  
 RL: USES (Uses)  
 (photopolymn. initiator, photosensitive resin compns. containing, for photoresists)
- RN 39420-45-6 HCAPLUS
- CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



- IC ICM C08F002-50  
 ICS C08F002-44; G03C001-68
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76
- ST photosensitive polymer compn photoresist; acridine photopolymn initiator photoresist; elec circuit photoresist
- IT Polymerization catalysts  
 (photochem., acridine derivs., photosensitive resin compns. containing, for photoresists)
- IT 4098-71-9D, reaction products with (hydroxyphenyl)acridine and polypropylene glycol monoacrylate 36482-93-6D, 9-(p-Hydroxyphenyl)acridine, reaction products with isophorone diisocyanate and polypropylene glycol monoacrylate 39420-45-6D, Blemmer P 1000, reaction products with (hydroxyphenyl)acridine and isophorone diisocyanate 121819-78-1, 9-(p-n-Hexylphenyl)acridine

RL: USES (Uses)  
(photopolymn. initiator, photosensitive resin  
compns. containing, for photoresists)  
IT 56093-53-9, Tetramethylolmethane triacrylate  
RL: USES (Uses)  
(photosensitive resin compns. containing, A-TMM 3L, for  
photoresists)  
IT 25133-98-6, 2-Ethylhexyl acrylate-methacrylic acid-methyl  
methacrylate copolymer 41637-38-1, BPE 10  
RL: USES (Uses)  
(photosensitive resin compns. containing, for photoresists)

L46 ANSWER 44 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1987:25797 HCAPLUS Full-text  
DOCUMENT NUMBER: 106:25797  
ORIGINAL REFERENCE NO.: 106:4233a,4236a  
TITLE: Photosensitive solder resist ink  
compositions  
INVENTOR(S): Kamayatsu, Yuichi; Sawazaki, Kenji; Suzuki,  
Morio  
PATENT ASSIGNEE(S): Taiyo Ink Seizo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 61000272	A	19860106	JP 1984-119106	198406 12
			<--	
JP 01039698	B	19890823		
PRIORITY APPLN. INFO.:			JP 1984-119106	198406 12

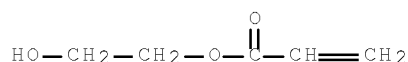
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AB Solder resist ink compns. contain (1) a radiation-curing type resin obtained  
by reaction of a novolak type epoxy resin-unsatd. monocarboxylic acid reaction  
product with a diisocyanate-hydroxy group-containing (meth)acrylate reaction  
product, (2) a photopolymn. initiator, and (3) an organic solvent. Thus, a  
cresol novolak type epoxy resin acrylate was made to react with an isophorone  
diisocyanate-pentaerythritol triacrylate reaction product, and the resultant  
resin was mixed with butyl Cellosolve, benzoin iso-Pr ether, phthalocyanine  
green, and Modaflow (a leveling agent) to give a screen printing ink. The ink  
was coated on a Cu laminate (for printed circuits) to form a UV resist layer,  
from which a soldering resistant pattern was prepared  
IT 26022-14-0, Modaflow  
RL: USES (Uses)  
(photosensitive ink composition containing, for  
soldering-resistant pattern formation)  
RN 26022-14-0 HCAPLUS  
CN 2-Propenoic acid, 2-hydroxyethyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 818-61-1



CMF C5 H8 O3



- IC ICM C09D011-10  
ICS G03C001-71; H05K003-28; H05K003-34
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76
- IT Epoxy resins, compounds  
RL: USES (Uses)  
(cresolic, reaction products with acrylic acid, isophorone diisocyanate, methacrylic acid, pentaerythritol triacrylate, and TDI, photosensitive ink composition containing, for soldering-resistant pattern formation)
- IT Phenolic resins, compounds  
RL: USES (Uses)  
(epoxy, cresol-based, reaction products with acrylic acid, isophorone diisocyanate, methacrylic acid, pentaerythritol triacrylate, and TDI, photosensitive ink composition containing, for soldering-resistant pattern formation)
- IT 75-57-0, Tetramethylammonium chloride 79-10-7D, reaction products with cresol-based epoxy resins, isophorone diisocyanate, and pentaerythritol triacrylate 79-41-4D, reaction products with cresol-based epoxy resins, pentaerythritol triacrylate, and TDI 84-51-5, 2-Ethylanthraquinone 103-83-3, Benzyldimethylamine 110-80-5 111-76-2, Butyl cellosolve 111-90-0, Carbitol 112-15-2, Carbitol acetate 471-34-1, Calcium carbonate, uses and miscellaneous 931-36-2, 2-Ethyl-4-methylimidazole 1328-53-6, Phthalocyanine green 4098-71-9D, reaction products with acrylic acid, cresol-based epoxy resins, and pentaerythritol triacrylate 6652-28-4, Benzoin isopropyl ether 7727-43-7 13750-62-4 14807-96-6, Talc, uses and miscellaneous 15625-89-5, Trimethylolpropane triacrylate 15625-89-5D, reaction products with acrylic acid, cresol-based epoxy resins, isophorone diisocyanate, methacrylic acid, and TDI 25068-38-6 26022-14-0, Modaflow 26471-62-5D, reaction products with cresol-based epoxy resins, methacrylic acid, and pentaerythritol triacrylate 29570-58-9, Dipentaerythritol hexaacrylate 82799-44-8 104074-13-7  
RL: USES (Uses)  
(photosensitive ink composition containing, for soldering-resistant pattern formation)

L46 ANSWER 45 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:177734 HCAPLUS Full-text

DOCUMENT NUMBER: 104:177734

ORIGINAL REFERENCE NO.: 104:27995a, 27998a

TITLE: A photosensitive resin composition  
which is improved with respect to its surface  
tack-free characteristic after curing

INVENTOR(S): Minonishi, Kuniaki; Sato, Reijiro

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 59 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 154994	A2	19850918	EP 1985-102895	198503 13
			<--	
EP 154994	A3	19860122		
EP 154994	B1	19890614		
R: BE, DE, FR, GB				
JP 60191237	A	19850928	JP 1984-46472	198403 13
			<--	
JP 05055857	B	19930818		
US 4716094	A	19871229	US 1985-709186	198503 07
			<--	
AU 8539769	A	19850919	AU 1985-39769	198503 12
			<--	
AU 574766	B2	19880714		
JP 08286361	A	19961101	JP 1996-51909	199603 08
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PRIORITY APPLN. INFO.:			JP 1984-46472	A 198403 13
			<--	

OTHER SOURCE(S): MARPAT 104:177734

AB A photosensitive resin composition for photoresists and relief images for use as letterpress printing plates, molding matrixes, and decorative materials is comprised of ethylenically unsatd. compds., a photoinitiator, a prepolymer, and a compound having the general formula  $R_1CO_2H$ ,  $R_1CONH_2$ , or  $R_1CH_2OR_2$  ( $R_1 = C_nH_{2n+1}$ ,  $C_nH_{2n-1}$  where  $n = 11-21$ ;  $R_2 = H$ ,  $CO_2SZCO_2CH_2R_3$  where  $Z = C1-6$  divalent hydrocarbon group and  $R_3 = C_nH_{2n+1}$ ,  $C_nH_{2n-1}$  where  $n = 11-21$ ). The photosensitive resin composition is imagewise exposed to actinic radiation, developed by removing the uncured resin layer, and post-exposed to actinic radiation, with the resin images immersed in an aqueous solution containing an alkali metal salt or alkaline earth metal salt of  $H_2SO_3$  to give tack-free relief images. Thus, polypropylene glycol ( $M_n = 2000$ ) 1 and polypropylene glycol adipate 1 part were mixed with tolylene diisocyanate 0.2 part and reacted at  $80^\circ$  for 3 h to give a polyurethane. The polyurethane 2.2 parts was reacted with polypropylene glycol monomethacrylate ( $M_n = 380$ ) 0.47 part at  $80^\circ$  for 2 h to give a modified polyurethane. The modified polyurethane 100, polypropylene glycol monomethacrylate ( $M_n = 380$ ) 25, lauryl methacrylate 15, tetraethylene glycol dimethacrylate 10, 2,2-dimethoxy-2-phenylacetophenone 1.5, myristic acid 2, and 2,6-di-tert-butyl-p-cresol 0.2 part were mixed at  $50^\circ$  to give a photosensitive resin composition, poured over a polypropylene film, exposed to near UV (370 nm), developed in an aqueous solution of a nonionic surfactant (Wash Out Agent W-7), rinsed, immersed in 0.1%  $Na_2SO_3$ , exposed to the above UV source, dried, and the surface tack of the photocured relief-image plate determined to be 0 g.

IT 39420-45-6

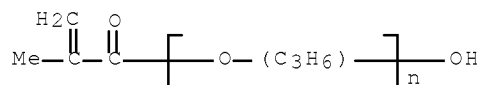
RL: USES (Uses)

(photosensitive resin compns. containing prepolymer and photoinitiator and carboxylic acid or amide and ethylenically unsatd. monomers and, for nontacky relief image formation)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],

$\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IT 39420-45-6D, reaction product with isocyanate terminated polyurethane

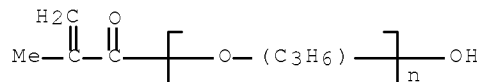
RL: USES (Uses)

(photosensitive resin compns. containing, for nontacky relief image formation)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],

$\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM G03C001-68

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive prepolymer nontacky relief image; photoresist prepolymer nontacky carboxylic acid; amide prepolymer photoimaging compn nontacky

IT Carboxylic acids, uses and miscellaneous

RL: USES (Uses)

(photosensitive compns. containing prepolymer and photoinitiator and ethylenically unsatd. monomers and, for production of nontacky relief images)

IT Amides, uses and miscellaneous

RL: USES (Uses)

(photosensitive resin compns. containing prepolymer and photoinitiator and ethylenically unsatd. monomers and, for production of nontacky relief images)

IT Decoration

(relief plastic, photosensitive resin compns. containing prepolymer and ethylenically unsatd. monomers and photoinitiator and carboxylic acid or amide for production of nontacky)

IT Printing plates

(relief, photosensitive resin compns. containing prepolymer and ethylenically unsatd. monomers and photoinitiator and carboxylic acid or amide for production of nontacky)

- IT Polyesters, uses and miscellaneous  
Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(unsatd., photosensitive resin compns. containing  
ethylenically unsatd. monomers and photoinitiator and carboxylic  
acid or amide and, for nontacky relief image formation)
- IT 9003-17-2D, hydroxy terminated polymer with TDI, reaction product  
with 2-hydroxy Et methacrylate or 2-hydroxy Et methacrylate, lauryl  
methacrylate, and diester 101516-71-6 101628-14-2D, reaction  
product with polypropylene glycol monomethacrylate  
RL: USES (Uses)  
(photosensitive resin compns. containing ethylenically  
unsatd. monomers and photoinitiator and carboxylic acid or amide  
and, for nontacky relief image formation)
- IT 6652-28-4 22499-13-4 24650-42-8  
RL: USES (Uses)  
(photosensitive resin compns. containing prepolymer and  
ethylenically unsatd. monomers and carboxylic acid or amide and,  
for nontacky relief image formation)
- IT 109-17-1 142-90-5 923-26-2 25852-49-7 39420-45-6  
RL: USES (Uses)  
(photosensitive resin compns. containing  
prepolymer and photoinitiator and carboxylic acid or amide and  
ethylenically unsatd. monomers and, for nontacky relief image  
formation)
- IT 128-37-0, uses and miscellaneous 150-76-5  
RL: USES (Uses)  
(photosensitive resin compns. containing prepolymer and  
photoinitiator and ethylenically unsatd. monomers and carboxylic  
acid or amide and, for nontacky relief image formation)
- IT 57-10-3, uses and miscellaneous 112-84-5 544-63-8, uses and  
miscellaneous 16545-54-3 36653-82-4  
RL: USES (Uses)  
(photosensitive resin compns. containing prepolymer and  
photoinitiator and ethylenically unsatd. monomers and, for  
nontacky relief image formation)
- IT 923-26-2D, reaction product with isocyanate terminated polybutadiene  
diol tolylene diisocyanate copolymer 39420-45-6D, reaction  
product with isocyanate terminated polyurethane  
RL: USES (Uses)  
(photosensitive resin compns. containing, for  
nontacky relief image formation)

L46 ANSWER 46 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1985:222322 HCAPLUS Full-text  
DOCUMENT NUMBER: 102:222322  
ORIGINAL REFERENCE NO.: 102:34897a,34900a  
TITLE: Photosensitive ink compositions  
PATENT ASSIGNEE(S): Ono, Takao, Japan; Ishii, Ginya  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 60004512	A	19850111	JP 1983-112333	

198306  
22

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PRIORITY APPLN. INFO.:

JP 1983-112333

198306  
22

&lt;--

AB The compns. useful as etching and plating resists comprise a phenone-type photoinitiator and a monoester (polymer) prepared from (a) (methyl)tetrahydrophthalic acid, (methyl)hexahydrophthalic acid, or their anhydrides and (b) a compound containing a polymerizable double bond and  $\geq 1$  alc. OH. Thus, a Cu-plated laminate was screen printed by a photosensitive composition containing polymer [96663-78-4] of monoester prepared from 2-hydroxyethyl methacrylate (I) [868-77-9] and methylhexahydrophthalic anhydride, I, phthalocyanine blue, 2-hydroxy-2-methylpropiophenone [7473-98-5], and BaSO<sub>4</sub> and irradiated by Hg lamp. The cured coating showed pencil hardness 3H, dissoln. time by 3% NaOH spray 5-10 s, and good etchant resistance.

IT 96663-78-4 96663-84-2

RL: USES (Uses)

(photosensitive ink compns. containing)

RN 96663-78-4 HCAPLUS

CN 1,2-Cyclohexanedicarboxylic acid, methyl-,  
mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

CRN 93951-37-2

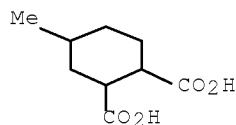
CMF C15 H22 O6

CCI IDS

CM 2

CRN 57567-84-7

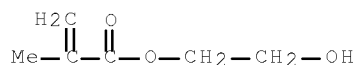
CMF C9 H14 O4



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 96663-84-2 HCAPLUS

CN 4-Cyclohexene-1,2-dicarboxylic acid, 3-methyl-,

mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

CRN 96663-83-1

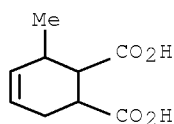
CMF C15 H20 O6

CCI IDS

CM 2

CRN 15941-50-1

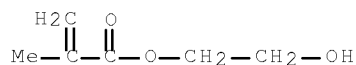
CMF C9 H12 O4



CM 3

CRN 868-77-9

CMF C6 H10 O3



IC ICM C08F020-20

ICS C08F002-50; G03C001-68

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

IT Resists

(photo-, UV, acrylic compns. containing propiophenone  
derivs. for)

IT Crosslinking catalysts

Polymerization catalysts

(photochem., propiophenone derivs., for acrylic ink  
compns.)

IT Inks

(photocurable, acrylic compns. for, containing  
propiophenone derivs.)

IT Inks

(photogravure, acrylic compns. for, containing  
propiophenone derivs.)

IT 611-70-1 7473-98-5

RL: USES (Uses)

(photochem. crosslinking and polymerization catalysts, photosensitive  
acrylic ink compns. containing)

IT 868-77-9 96663-55-7 96663-72-8 96663-78-4

96663-84-2

RL: USES (Uses)

(photosensitive ink compns. containing)

L46 ANSWER 47 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1983:513720 HCAPLUS Full-text  
 DOCUMENT NUMBER: 99:113720  
 ORIGINAL REFERENCE NO.: 99:17357a,17360a  
 TITLE: Photosensitive resin compositions for  
 flexographic plates  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 58076828	A	19830510	JP 1981-172932	198110 30

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PRIORITY APPLN. INFO.: JP 1981-172932

198110  
30

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AB Photosensitive resin compns. suitable for flexog. plate preparation consist of: (1) a urethane prepolymer (number-averaged mol. weight, Mn = 2000-8000) having (a) prepolymer main chain derived from polyols, whose main constituent is a hydroxy-terminated polyester (Mn = 500-3000), and diisocyanates, whose main constituent is OCNCH<sub>2</sub>ZCH<sub>2</sub>NCO (Z = phenylene, cyclohexylene; Z may be substituted with lower alkyl), and (b) photopolymerizable double bond-containing groups which are urethane-bonded to both ends of the main chain; (2) another urethane prepolymer (Mn = 2000-8000) having similar prepolymer main chain as (1) and a photopolymerizable double bond-containing group which is urethane-bonded to one end of the main chain; (3) crosslinking agent(s) having ≥1 photopolymerizable double bond/mol.; and (4) sensitizers. Thus, a PET film was coated with a 0.8-μm thick layer containing a urethane prepolymer (mixture of 1 and 2) obtained by reaction of poly(butylene adipate) with terminal OH groups (Mn = 2000), hydrogenated m-xylene diisocyanate (mol. weight = 194), oxyethylene-oxypropylene block polyether (mol. weight = 2000), 2-hydroxypropyl methacrylate, Bu<sub>2</sub>Sn dilaurate, p-methoxyphenol, and polyethylene diethylene adipate; polypropylene glycol monomethacrylate, dipropylene glycol dimethacrylate, and diallyl phthalate; benzoin iso-Pr ether; and p-methoxyphenol to obtain a photopolymer layer. The photopolymer layer showed excellent characteristics with respect to elasticity.

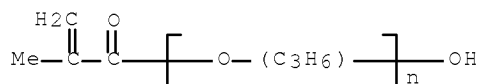
IT 39420-45-6

RL: USES (Uses)

(photosensitive composition containing, for flexog.  
plate preparation)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 α-(2-methyl-1-oxo-2-propen-1-yl)-ω-hydroxy- (CA INDEX  
 NAME)



IC G03C001-71; G03C001-68; G03F007-10  
ICA C08F002-50; C08F299-06  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(photoresistive resin composition containing, for flexog. plate preparation)  
IT Printing plates  
(flexog., photosensitive resin compns. for preparation of)  
IT 131-17-9 7559-82-2 39420-45-6 86714-41-2  
RL: USES (Uses)  
(photoresistive resin composition containing, for flexog. plate preparation)  
IT 109-16-0 109-17-1 1087-21-4 86714-41-2 86714-42-3  
86714-43-4 86714-44-5 86714-45-6 86745-86-0 86745-87-1  
RL: USES (Uses)  
(photoresistive resin composition containing, for flexog. plate preparation)

L46 ANSWER 48 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:25534 HCAPLUS Full-text

DOCUMENT NUMBER: 98:25534

ORIGINAL REFERENCE NO.: 98:3899a,3902a

TITLE: Image-forming compositions containing pigments and ionic polyester dispersing agents  
INVENTOR(S): Noonan, John M.; Ryan, Raymond W.; Houle, James F.

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8202780	A1	19820819	WO 1982-US168	19820210
<--				
US 4419437	A	19831206	US 1981-233526	19810211
<--				
CA 1175703	A1	19841009	CA 1982-394903	19820126
<--				
AU 8282084	A	19820826	AU 1982-82084	



198202  
10

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AU 545584 B2 19850718  
BR 8206154 A 19830111 BR 1982-6154

198202  
10

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EP 70898                  A1                  19830209                  EP 1982-900889

198202  
10

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EP 70898 B1 19851016  
R: BE, DE, FR, GB, NL, SE  
JP 58500221 T 19830210 JP 1982-500956

198202  
10

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JP 01046050 B 19891005  
PRIORITY APPLN. INFO.: US 1981-233526 A

198102  
11

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WO 1982-US168                      A

198202  
10

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AB Substantially amorphous polyesters containing ionic moieties are useful as pigment dispersing agents in preparation of photoimaging compas. for lithog. plates and resists fabrication. The dispersing agents reduce pigment agglomeration and improve the dispersion stability. Thus, Monastral Red B pigment 1 kg and di-Me succinate-1,4-bis( $\beta$ -hydroxyethoxy)cyclohexane-dimethyl-3,3'-[(sodioimino)disulfonyl]-benzoate copolymer 25 g were mixed with 1,2-dichloroethane to give 20 weight% pigment solids, ball milled, mixed with addnl. 1,2-dichloroethane to give a dispersion with 11 weight% solids. The obtained pigment dispersion was used to form a photoimaging composition containing pigment dispersion 36.3, poly(1,4-cyclohexylenebis(oxyethylene)-1,4-phenylenediacrylate 10, Piccolastic A-50 resin binder 3.4, 2,6-di-tert-butyl-p-cresol 0.4, 2-benzoylmethylene-1-ethylnaphtho-[1,2-d]-thiazoline 0.5, leucopropyl violet dye 0.48, 2-azido-1-[carbobutoxymethylcarbamyl]benzimidazole 0.96, dihydroanhydropiperidinohehexose reductone 0.048, Modaflo surfactant 0.04, 1,2-dichloroethane to give 478 g total. The composition was stored 7 days at 50° and 50% relative humidity. A conventional Al support with a coating of CM-cellulose and Zn acetate was coated with the photoimaging composition, dried, imagewise exposed to a 2000 W Xe light source for 60 s, processed, treated with finisher, dried. The resultant coating was smooth and had uniform pigment d.

IT 26022-14-0

RL: USES (Uses)

(photoimaging composition containing polyester pigment dispersing agent and, lithog. plates production with)

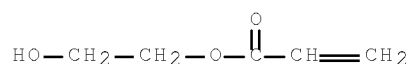
RN 26022-14-0 HCAPLUS

CN	2-Propenoic acid, 2-hydroxyethyl ester, homopolymer	(CA INDEX NAME)
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CM 1

CRN 818-61-1

CMF C5 H8 O3



IC G03C001-68  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT Pigments  
     (dispersing agents for, polyesters as, photoimaging compns. from)  
 IT Polyesters, uses and miscellaneous  
     RL: USES (Uses)  
     (dispersing agents, for pigments, photoimaging compns. from)  
 IT Photoimaging compositions and processes  
     (polyester pigment dispersing agents for)  
 IT Lithographic plates  
     (polyester pigment dispersing agents for photoimaging compns. for fabrication of)  
 IT 58608-19-8  
     RL: USES (Uses)  
     (in photoimaging compns. for lithog. plate production)  
 IT 128-37-0, uses and miscellaneous 1680-16-6 9003-53-6 26022-14-0 35976-48-8 53710-66-0  
     RL: USES (Uses)  
     (photoimaging composition containing polyester pigment dispersing agent and, lithog. plates production with)  
 IT 1047-16-1  
     RL: USES (Uses)  
     (photoimaging composition containing, polyester dispersing agents for)  
 IT 68508-90-7P 83970-21-2P 83970-22-3P 83970-23-4P 83970-24-5P  
     RL: PREP (Preparation)  
     (pigment dispersing agent for photoimaging compns., preparation of)

L46 ANSWER 49 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:43859 HCAPLUS Full-text

DOCUMENT NUMBER: 96:43859

ORIGINAL REFERENCE NO.: 96:7109a,7112a

TITLE: Photopolymerizable polyester-containing compositions

INVENTOR(S): Okuya, Ken

PATENT ASSIGNEE(S): Tamura Kaken Co., Ltd., Japan

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4293636	A	19811006	US 1980-178233	198008
				14

JP 57013444

A

19820123

JP 1980-88408

198006

27

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JP 01012376

B

19890228

PRIORITY APPLN. INFO.:

JP 1980-88408

A

198006

27

&lt;--

AB Photosensitive polyester compns. for use in the fabrication of printed circuit boards are composed of a polyester, a half-esterified hydroxyalkyl acrylate or methacrylate of a polybasic acid or its anhydride, an ethylenically unsatd. bond-containing vinyl monomer, and a photopolymn. initiator. Thus, an ethylene glycol-fumaric acid-phthalic acid polymer 15.0, a half ester of maleic anhydride with glycerin diacrylate 33.8, p-tert-butylmonochloroacetophenone diacrylate 14.7, p-tert-butylmonochloroacetophenone 3, BaSO<sub>4</sub> 31.0, Modaflo 2.0, and Cyanin green 0.5 weight% was screen printed on a Cu foil of a printed circuit board and then UV-cured to give a coating with a pencil hardness of 2H. The coating endured treatment with FeCl<sub>3</sub>, CuCl<sub>2</sub>, and NH<sub>4</sub> persulfate etchants for ≥20 min and was stripped in 10 s in a 3% aqueous NaOH solution of 55°.

IT 26022-14-0

RL: USES (Uses)

(photosensitive compns. containing, for printed  
elec. circuit fabrication)

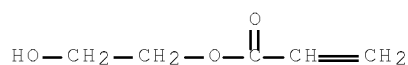
RN 26022-14-0 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 818-61-1

CMF C5 H8 O3



IC G03C001-68

INCL 430281000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Fatty acids, polymers

RL: USES (Uses)

(dimers, photosensitive compns. containing, for printed  
elec. circuit fabrication)

IT Polyesters, uses and miscellaneous

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist compns. containing, for fabrication of printed  
circuits)

IT Resists

(photo-, photopolymerizable polyester-containing compns.  
for)

IT Electric circuits

(printed, photopolymerizable polyester-containing compns.  
in fabrication of)

IT 27697-00-3 80440-96-6

RL: USES (Uses)

(photosensitive compns. containing polyesters and, for

printed elec. circuit fabrication)  
IT 51252-88-1  
RL: USES (Uses)  
(photosensitive compns. containing polyesters and, for  
printed elec. circuits fabrication)  
IT 85-42-7D, esters with hydroxyalkyl acrylates or methacrylates  
85-43-8D, esters with hydroxyalkyl acrylates or methacrylates  
85-44-9D, esters with hydroxyalkyl acrylates or methacrylates  
89-32-7D, esters with hydroxyalkyl acrylates or methacrylates  
97-65-4D, esters with hydroxyalkyl acrylates or methacrylates  
97-90-5 100-21-0D, esters with hydroxyalkyl acrylates or  
methacrylates 103-11-7 106-74-1 108-31-6D, esters with  
hydroxyalkyl acrylates or methacrylates 109-16-0 110-17-8D,  
esters with hydroxyalkyl acrylates or methacrylates 111-20-6D,  
esters with hydroxyalkyl acrylates or methacrylates 121-91-5D,  
esters with hydroxyalkyl acrylates or methacrylates 123-99-9D,  
esters with hydroxyalkyl acrylates or methacrylates 124-04-9D,  
esters with hydroxyalkyl acrylates or methacrylates 142-90-5  
498-23-7D, esters with hydroxyalkyl acrylates or methacrylates  
552-30-7D, esters with hydroxyalkyl acrylates or methacrylates  
688-84-6 818-61-1 818-61-1D, esters with polybasic acids and  
anhydrides 821-38-5D, esters with hydroxyalkyl acrylates or  
methacrylates 868-77-9 868-77-9D, esters with polybasic acids  
and anhydrides 923-26-2 923-26-2D, esters with polybasic acids  
and anhydrides 999-61-1 999-61-1D, esters with polybasic acids  
and anhydrides 1070-70-8 1189-08-8 1680-21-3 1985-51-9  
2082-81-7 2156-97-0 2223-82-7 2274-11-5 2351-43-1D, esters  
with polybasic acids and anhydrides 2358-84-1 2370-63-0  
2399-48-6 2421-27-4 2455-24-5 2495-35-4 2495-37-6  
2761-08-2D, esters with polybasic acids and anhydrides 2761-09-3D,  
esters with polybasic acids and anhydrides 3121-61-7 3253-41-6  
3253-41-6D, esters with polybasic acids and anhydrides 3290-92-4  
3326-90-7D, esters with polybasic acids and anhydrides 3524-66-1  
3524-68-3 3524-68-3D, esters with polybasic acids and anhydrides  
4074-88-8 4813-57-4 4986-89-4 6606-59-3 6976-93-8  
7251-90-3 7559-82-2 7727-43-7 10595-06-9 13048-33-4  
13159-51-8 13159-52-9D, esters with polybasic acids and anhydrides  
13532-94-0 13533-05-6D, esters with polybasic acids and anhydrides  
15625-89-5 15731-80-3D, esters with polybasic acids and anhydrides  
19485-03-1 21886-62-4 21982-30-9D, esters with polybasic acids  
and anhydrides 22499-12-3 24599-21-1 25151-33-1 25852-47-5  
25852-49-7 26022-14-0 26183-87-9 26301-26-8  
26570-48-9 26590-20-5D, esters with hydroxyalkyl acrylates or  
methacrylates 28497-59-8D, esters with polybasic acids and  
anhydrides 29570-58-9 30145-51-8 31249-11-3 32120-16-4  
32360-05-7 41680-37-9 48145-04-6 52174-50-2D, esters with  
polybasic acids and anhydrides 52496-08-9 53664-39-4  
57472-68-1 58593-15-0 64111-89-3 80440-97-7  
RL: USES (Uses)  
(photosensitive compns. containing, for printed  
elec. circuit fabrication)  
L46 ANSWER 50 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1980:224298 HCAPLUS Full-text  
DOCUMENT NUMBER: 92:224298  
ORIGINAL REFERENCE NO.: 92:36171a,36174a  
TITLE: Photohardening type resin compositions  
INVENTOR(S): Yamaura, Michio; Nakamura, Takahiro; Oe,  
Michisuke; Tomie, Takashi; Naka, Kiyomi  
PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55000717	A	19800107	JP 1978-73169	19780619

PRIORITY APPLN. INFO.: <-- JP 1978-73169 A 19780619

AB A photohardening type resin composition for relief printing plates contains (1) a polyester (mol. weight 600-4000) having  $\leq 1$  (on average) ethylenic double bond and  $\geq 1$  end CO<sub>2</sub>H group, (2) an unsatd. polyurethane (mol. weight 1000-10000), (3)  $\geq 1$  unsatd. compound of the general formula H<sub>2</sub>C:CR<sub>1</sub>CO<sub>2</sub>ZO<sub>2</sub>CCR<sub>2</sub>:CH<sub>2</sub> [R = H, Me; Z = -(CHR<sub>1</sub>CHR<sub>2</sub>)<sub>n</sub>mCHR<sub>1</sub>CHR<sub>2</sub>- (R<sub>1</sub>, R<sub>2</sub> = H, Me; n = 0, 1; m = 1, 2)], and (4) a photopolymer. initiator. The photosensitive resin compns. give relief images having good moisture resistance, low Young's modulus, high elongation, and good organic solvent resistance. Thus, adipic acid-diethylene glycol-fumaric acid copolymer (acid value 90; 1022:742:116 weight ratio) 35, a polyurethane [prepared by reacting poly(diethylene adipate) 2080, m-xylylene diisocyanate 376, and 2-hydroxyethyl methacrylate 286 g] 36, acrylamide 4, diethylene glycol diacrylate 10, methoxytetraethylene glycol monoacrylate 15, benzoin Et ether 1.0, and monomethoxyhydroquinone 0.02 part were mixed to give photosensitive resin composition. The relief printing plate prepared from the composition exhibited good tensile strength, elongation, heat- and moisture-resistances, and low Young's modulus.

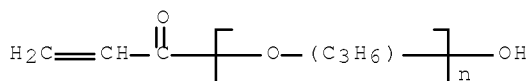
IT 50858-51-0

RL: USES (Uses)

(photosensitive resin compns. containing, for relief printing plate)

RN 50858-51-0 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC C08F299-06; C08F002-50

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST photosensitive resin relief printing plate; polyester photosensitive resin compn; polyurethane photosensitive resin compn

IT Printing plates

(relief, photosensitive resin compns. containing polyester, polyurethane, and acrylic monomers for)

IT 79-06-1, uses and miscellaneous 79-39-0 123-31-9, uses and

miscellaneous 574-09-4 824-46-4 1680-21-3 2358-84-1  
4074-88-8 6606-59-3 9046-11-1 28348-42-7 41026-23-7  
~~50858-51-0~~ 57472-68-1 71602-73-8 71602-74-9  
71602-75-0

RL: USES (Uses)

(photosensitive resin compns. containing, for  
relief printing plate)

L46 ANSWER 51 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:189241 HCAPLUS Full-text

DOCUMENT NUMBER: 92:189241

ORIGINAL REFERENCE NO.: 92:30541a,30544a

TITLE: Photohardening resin compositions for  
printing plates

INVENTOR(S): Yamaura, Michio; Nakamura, Takahiro; Tomie,  
Takashi; Oe, Michisuke; Naka, Kiyoshi

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 54142293	A	19791106	JP 1978-50145	197804 28
			<--	
JP 61017854	B	19860509		
PRIORITY APPLN. INFO.:			JP 1978-50145	A 197804 28
			<--	

AB Photosensitive resin compns. contain (1) a polyester of average mol. weight 600-4000 which has  $\leq 1$  ethylenic double bond and  $\leq 1$  end carboxyl group/mol.; (2) an unsatd. polyurethane of average mol. weight 1000-10,000; (3) ethylenically unsatd. monomers, and (4) photopolymn. initiators. The photosensitive resin compns. give relief images with good moisture resistance, low Young's modulus, good elongation, and good swelling resistance. The photosensitive resins also exhibit good developability. Thus, adipic acid-diethylene glycol-fumaric acid (116:584:636 weight ratio) copolymer (acid value 20, number of ethylenic double bond 0.3/mol., number of end CO<sub>2</sub>H group 0.7/mol.) 35, a polyurethane prepared by reacting poly(diethylene adipate) with m-xylylene diisocyanate and 2-hydroxyethyl methacrylate (2080, 376, and 286 g, resp.) 36, acrylamide 4, tetraethylene glycol diacrylate 10, methoxytetraethylene glycol monomethacrylate 15, benzoin Et ether 1.0, and monomethoxyhydroquinone 0.02 part were mixed to give a photosensitive resin having good developability. The tensile strength, Young's modulus, and elongation of the relief images were 0.83, 0.22 kg/mm<sup>2</sup>, and 187%, resp. The relief images also exhibited good heat resistance.

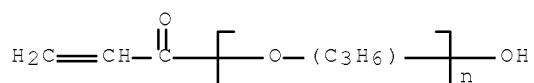
IT 50858-51-0

RL: USES (Uses)

(photosensitive resin compns. containing, for  
relief printing plates)

RN 50858-51-0 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC C08F299-06; C08F002-50  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 IT Polyesters, uses and miscellaneous  
 Urethane polymers, uses and miscellaneous  
 RL: USES (Uses)  
 (photosensitive resin compns. containing, for relief printing plates)  
 IT Printing plates  
 (relief, photosensitive resin compns. containing polyesters and urethane polymers for)  
 IT 79-06-1, uses and miscellaneous 79-39-0 123-31-9, uses and miscellaneous 574-09-4 824-46-4 6652-28-4 17831-71-9 25053-83-2 28348-42-7 50858-51-0 52496-08-9 57454-26-9 71602-73-8 71602-74-9 71602-75-0 71602-76-1 73501-88-9  
 RL: USES (Uses)  
 (photosensitive resin compns. containing, for relief printing plates)

L46 ANSWER 52 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1979:620345 HCAPLUS Full-text  
 DOCUMENT NUMBER: 91:220345  
 ORIGINAL REFERENCE NO.: 91:35367a,35370a  
 TITLE: Photosensitive resin composition for flexographic plates  
 INVENTOR(S): Hagiwara, Tsuneo; Iwata, Kaoru; Horike, Akihiro  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 54058790	A	19790511	JP 1977-125100	19771020

PRIORITY APPLN. INFO.: <-- JP 1977-125100 A 19771020  
 <--

AB Photosensitive resin compns. contain (1) polymerizable ethylenically unsatd. monomers, (2) a photosensitizer, and (3) reaction products of glycidyl (meth)acrylate with a polymer having chain-terminating groups of formula  $\text{H}_2\text{C}:\text{CRCO}_2(\text{ZO})\text{pCOZ1}(\text{CO}_2\text{H})_2\text{CO}-$  or  $\text{H}_2\text{C}:\text{CRCO}_2(\text{ZO})\text{pCOZ1}(\text{CO}_2\text{H})_2\text{CO}_2\text{Z2O}-$  (R = H, Me; Z = C2-5 alkylene; p = 1-20; Z1 = C3-40 tetravalent organic moiety in which the CO<sub>2</sub>H and CO groups are attached to adjacent C atoms; Z2 = aliphatic polyol

moiety whose average mol. weight is 300-4000) and having structural repeating units of the formulas  $-\text{OZ}_2\text{O}_2\text{CZ}_1(\text{CO}_2\text{H})_2\text{CO}-$  and/or  $-\text{OZ}_2\text{O}_2\text{CNHZ}_3\text{NHCO}-$  ( $\text{Z}_1, \text{Z}_2$  are same as above;  $\text{Z}_3 = \text{C}_2\text{-15}$  divalent aliph, arom, or heterocyclic moiety). The photosensitive resin compns. have good sensitivity, are water-base solution developable, and are suitable for preparing flexog. printing plates. Thus, polyethylenebutylene adipate (average mol. weight 1000, OH groups at both ends of chain; Nipporan 141) 4000 and hexahydroxylylene diisocyanate (m/p ratio 3/7) 388 parts were heated at  $90^\circ$ , then reacted with 1,2,3,4-butanetetracarboxylic acid dianhydride 594 parts to give a polyester urethane. The polyester urethane and 2-hydroxyethyl methacrylate 260 parts were reacted, and the resultant polymer was reacted with glycidyl methacrylate. The reaction products 100, diallyl phthalate 6.25, tetraethylene glycol dimethacrylate 6.25, polypropylene glycol monomethacrylate (average mol. weight 370) 12.5, and benzoin Et ether 1.25 parts were mixed to give a photosensitive resin composition. The resin composition showed good sensitivity and developability (with 0.5%  $\text{NaCO}_3$ ) and gave a high-quality flexog. plate.

IT 39420-45-6

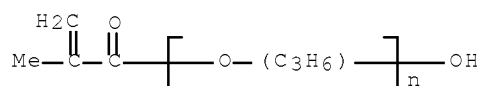
RL: USES (Uses)

(photosensitive resin compns. containing, for flexog. plates)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],

$\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC C08F299-04; C08F002-50; G03C001-68; G03F007-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT Polyesters, uses and miscellaneous

RL: USES (Uses)

(photosensitive resin compns. containing, for flexog. plates)

IT Printing plates

(flexog., photosensitive resin compns. for)

IT 84-65-1 97-88-1 109-17-1 131-17-9 574-09-4 1187-59-3

1746-23-2 2156-97-0 2873-97-4 3524-62-7 6652-28-4

17831-71-9 20166-49-8 25852-47-5 39420-45-6

39420-45-6 45314-30-5 72058-44-7 72058-45-8

72061-10-0 72061-11-1 72063-42-4 72063-43-5 72068-04-3

RL: USES (Uses)

(photosensitive resin compns. containing, for flexog. plates)

L46 ANSWER 53 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:620344 HCAPLUS Full-text

DOCUMENT NUMBER: 91:220344

ORIGINAL REFERENCE NO.: 91:35367a,35370a

TITLE: Photosensitive resin compositions for flexographic plates

INVENTOR(S): Iwata, Kaoru; Hagiwara, Tsuneo; Horike, Akihiro

PATENT ASSIGNEE(S): Teijin Ltd., Japan



SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54058793	A	19790511	JP 1977-125102	19771020

PRIORITY APPLN. INFO.: JP 1977-125102 A 19771020

AB Photosensitive resin compns. contain (1) sensitizers, (2) polymerizable unsatd. polyesters, (3) polymerizable ethylenically unsatd. monomers, and (4) polymers having chain-terminating groups of the formula  $H_2C:CRCO_2(ZO)PCOZ_1(CO_2H)2CO-$  or  $H_2C:CRCO_2(ZO)pCOZ_1(CO_2H)2COZ_2O-$  ( $R = H, Me$ ;  $Z = C_2-5$  alkylene;  $p = 1-20$ ;  $Z_1 = C_3-40$  tetravalent organic moiety in which the  $CO_2H$  and  $CO$  groups are attached to adjacent C atoms;  $Z_2 =$  aliphatic polyester and/or polyol moiety whose average mol. weight is 300-4000) and structural repeating units of formulas  $-OZ_2O_2CZ_1(CO_2H)2CO-$  and/or  $-OZ_2O_2CNHZ_3NHCO-$  ( $Z_1, Z_2 =$  same as above;  $Z_3 = C_2-15$  divalent aliphatic, aromatic, or heterocyclic moiety). The photosensitive compns. have good developability in aqueous developer and give high-quality flexog. plates. Thus, polyethylenebutylene adipate (average mol. weight 1000, OH groups on both ends of the main chain; Nipporan 141) 2000 parts was reacted with hexahydroxylylene diisocyanate 194 parts, then with 1,2,3,4-butanetetracarboxylic acid dianhydride 297 parts, and finally with 2-hydroxyethyl methacrylate 130 parts to give a polyester urethane. Sep. trimellitic anhydride 96, fumaric acid 232, adipic acid 365, and ethylene glycol 477 parts were copolymd. to give an unsatd. polyester. The polyester urethane 70, the unsatd. polyester 30, methacrylamide 5, tetraethylene glycol dimethacrylate 7.5, diallyl isophthalate 7.5, tetradecaethylene glycol dimethacrylate 15, and benzoin Et ether 1.3 parts were mixed to give a photosensitive resin composition which showed good sensitivity and developability. The flexog. plate prepared from the resin had good elasticity and good size reproducibility.

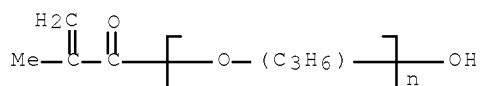
IT 39420-45-6

RL: USES (Uses)

(photosensitive resin compns. containing, for flexog. plates)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC C08F299-04; C08F002-50; G03C001-68; G03F007-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic

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Processes)
IT Printing plates
      (flexog., photosensitive resin comps. for)
IT 79-39-0 109-17-1 112-47-0 131-17-9 574-09-4 1087-21-4
    1746-23-2 2156-97-0 2873-97-4 3524-62-7 6652-28-4
    20166-49-8 25852-47-5 39420-45-6 39420-45-6
    45314-30-5 56343-22-7 71402-86-3 71402-87-4 71437-35-9
    71437-36-0 71437-37-1 71437-38-2 71602-74-9 72058-43-6
    72061-09-7 72076-61-0 72103-88-9
RL: USES (Uses)
      (photosensitive resin comps. containing, for
      flexog. plates)

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L46 ANSWER 54 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1979:549492 HCAPLUS Full-text  
DOCUMENT NUMBER: 91:149492  
ORIGINAL REFERENCE NO.: 91:23975a,23978a  
TITLE: Photosensitive resin compositions for  
flexographic plates  
INVENTOR(S): Iwata, Kaoru; Hagiwara, Tsuneo; Horike, Akihiro  
PATENT ASSIGNEE(S): Teijin Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 54058792	A	19790511	JP 1977-124463	19771019
			<--	
PRIORITY APPLN. INFO.:			JP 1977-124463	A 19771019
			<--	

AB Photosensitive resin compns. contain a sensitizer,  $\geq 1$  monomer having ethylenic double bond(s), and a polymer having structural repeating units of the formula  $-\text{OZ}(\text{OZCZ}_1(\text{CO}_2\text{H})_2\text{CO}-$  or  $-\text{OZ}(\text{OZCNH}_2\text{Z}_2\text{NHCO}-$  (where Z = aliphatic polyester or polyol moiety whose average mol. weight is 300-4000;  $\text{Z}_1 = \text{C}_3\text{-40}$  tetravalent organic moiety;  $\text{Z}_2 = \text{C}_2\text{-15}$  aliphatic, alicyclic, or aromatic moiety) and having end-terminating groups of formula  $\text{H}_2\text{C}:\text{CRCO}_2(\text{Z}_3)\text{pCOZ}_1(\text{CO}_2\text{H})_2\text{CO}-$  or  $\text{H}_2\text{C}:\text{CRCO}_2(\text{Z}_3)\text{pCOZ}_1(\text{CO}_2\text{H})_2\text{CO}_2\text{ZO}-$  ( $\text{R} = \text{H}, \text{Me}$ ; Z,  $\text{Z}_1 =$  same as above;  $\text{Z}_3 = \text{C}_2\text{-5}$  alkylene;  $p = 1\text{-}20$ ). The photosensitive resins can be developed with water-based developers and are useful for preparing flexog. plates. Thus, polyethylene butylene adipate (average mol. weight 1000, OH groups on both ends; Nipporan 141) 2000 and hexahydroxylylene diisocyanate (m/p ratio = 3/7) 194 parts were heated at  $90^\circ$ , then 1,2,3,4-butanetetracarboxylic acid dianhydride 297 parts was added, and the mixture was heated at  $140^\circ$ . The resultant polyester-urethane was heated with 2-hydroxyethyl methacrylate 130 parts in the presence of N-nitrosodiphenylamine to give a polyester-urethane having pendant groups containing double bond and carboxyl groups. The polymer 100, diallyl phthalate 6.25, tetraethylene glycol dimethacrylate 6.25, polypropylene glycol monomethacrylate (average volume weight 370) 12.5, and benzoin Et ether 1.25 parts were mixed to give a photosensitive resin composition which yielded a high quality flexog. plate.

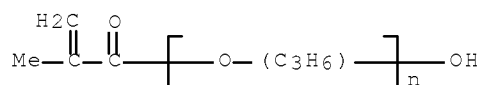
IT 39420-45-6

RL: USES (Uses)

(photosensitive resin compns. containing, for  
flexog. plates)

RN 39420-45-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  
 $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX  
NAME)



IC C08F299-02; C08F002-50

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
Processes)

IT Printing plates

(flexog., photosensitive resin compns. for, containing  
polyester derivs.)

IT 84-65-1 97-88-1 109-17-1 574-09-4 1026-92-2 1187-59-3  
2156-97-0 2873-97-4 3524-62-7 6652-28-4 17831-71-9  
20166-49-8 25338-51-6 25852-47-5 39420-45-6  
45314-30-5 71402-86-3 71402-87-4 71437-35-9 71437-36-0  
71437-37-1 71437-38-2 71497-18-2

RL: USES (Uses)

(photosensitive resin compns. containing, for  
flexog. plates)

L46 ANSWER 55 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:549489 HCAPLUS Full-text

DOCUMENT NUMBER: 91:149489

ORIGINAL REFERENCE NO.: 91:23975a,23978a

TITLE: Photosensitive resin compositions

INVENTOR(S): Yamaura, Michio; Oe, Michisuke; Naka, Kiyomi

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 54054192	A	19790428	JP 1977-119965	197710 07

PRIORITY APPLN. INFO.:

JP 1977-119965

A

197710  
07

AB Photosensitive resin compns. for relief printing plate production are composed of (1) an unsatd. polyester (mol. weight 500-4000) which has ethylenically unsatd. polycarboxylic acid units (1-3 units/mol) and CO<sub>2</sub>H chain-terminating groups, (2) an acrylurethane prepared by reacting a polyester polyol (average

mol. weight 500-4000) with a polyisocyanate ( $\geq 2$  mol/mol polymer) and end-double bond-forming compound ( $\geq 2$  mol/mol polymer), (3) ethylenically unsatd. monomers, and (4) photosensitizers. The resins give relief images with low Young's modulus, high elongation, and mech strength. Thus, fumaric acid 116, adipic acid 876, and diethylene glycol 636 g were copolymd. to give an unsatd. polyester having 2 CO<sub>2</sub>H groups. Sep., polydiethylene adipate (OH value 54, acid value  $\leq 1$ ) 2080 g was reacted with m-xylene diisocyanate 376 g and subsequently with 2-hydroxyethyl methacrylate 286 g to give an acrylurethane. The unsatd. polyester 35, the acrylurethane 36, acrylamide 4, tetraethylene glycol diacrylate 10, methoxytetraethylene glycol monomethacrylate 15, benzoin Et ether 1, and monomethoxyhydroquinone 0.02 part were mixed to give a photosensitive resin composition from which a flexible relief printing plate was prepared. The Young's modulus, tensile strength, and elongation of the relief printing plate were 0.19 kg/mm<sup>2</sup>, 0.41 kg/mm<sup>2</sup>, and 123%, resp.

IT 50858-51-0

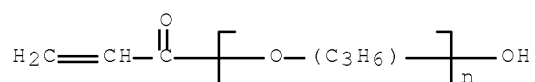
RL: USES (Uses)

(photosensitive resin composition containing, for flexog. plates)

RN 50858-51-0 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],

$\alpha$ -(1-oxo-2-propen-1-yl)- $\omega$ -hydroxy- (CA INDEX NAME)



IC C08F299-06; C08F002-50; G03C001-68; G03F007-08

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT Printing plates

(relief, photosensitive resin compns. containing unsatd. polyester and acrylurethane for)

IT 79-06-1, uses and miscellaneous 79-39-0 123-31-9, uses and miscellaneous 574-09-4 824-46-4 6652-28-4 17831-71-9 25852-49-7 50858-51-0 52496-08-9 57454-26-9

RL: USES (Uses)

(photosensitive resin composition containing, for flexog. plates)

IT 28348-42-7 71602-73-8 71602-74-9

RL: USES (Uses)

(photosensitive resin compns. containing acrylurethane and, for flexog. plates)

IT 71602-75-0 71602-76-1 71602-77-2

RL: USES (Uses)

(photosensitive resin compns. containing unsatd. polyester and, for flexog. plates.)

L46 ANSWER 56 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:570906 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 83:170906

ORIGINAL REFERENCE NO.: 83:26751a,26754a

TITLE: Photosensitive compositions for lithographic printing plates

INVENTOR(S): Kita, Nobuyuki; Narutomi, Yasuhisa

PATENT ASSIGNEE(S): fugi, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 2 Japanese  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 50030604	A	19750326	JP 1973-82850	197307 23
			<--	
JP 52007364	B	19770302		
GB 1460978	A	19770106	GB 1974-30835	197407 11
			<--	
DE 2434912	A1	19750206	DE 1974-2434912	197407 19
			<--	
DE 2434912	C2	19830811		
FR 2238952	A1	19750221	FR 1974-25584	197407 23
			<--	
FR 2238952	B1	19781124		
CA 1041346	A1	19781031	CA 1974-205472	197407 23
			<--	
US 4275138	A	19810623	US 1976-723061	197609 14
			<--	
PRIORITY APPLN. INFO.:			JP 1973-82850	A 197307 23
			<--	
			US 1974-489434	A1 197407 17
			<--	

AB Photosensitive compns. contain diazo compds. and polymers having  $\geq 50$  weight % monomeric units of structure  $[\text{CH}_2\text{CR}_1[\text{CO}_2(\text{CH}_2\text{CHR}_2\text{O})_n\text{H}]]$  ( $\text{R}_1 = \text{H, Me; R}_2 = \text{H, Me, Et, ClCH}_2$ ;  $n = 1-10$ ). The polymers improve the abrasion resistance of the photosensitive layer without degrading the storage stability of the photosensitive layer, and hence, the compns. are useful for preparing lithog. printing plate. Thus,  $\beta$ -hydroxyethyl methacrylate 100g and benzoyl peroxide 0.75 g were added dropwise (in 2 hr) to 180g of 2-methoxyethanol 180g, heated to  $100^\circ$  under N, then a mixture of 2-methoxyethanol 20 and benzoyl peroxide 0.025g was added slowly (15 min), and the reaction was continued for 3 hr at  $100^\circ$  to give a poly( $\beta$ -hydroxyethyl methacrylate)(I) solution in 2-methoxyethanol. The 32% solution of (I) 2.4 was then mixed with (1) 0.2g of an acrylurethane compound prepared by reacting  $\beta$ -hydroxyethyl acrylate with Koronato L (a poly isocyanate compound from Nippon Polyurethane Kogyo K. K.), (2) 0.2g of 2-methoxy-4-hydroxy-5-benzoylbenzene sulfonic acid, (3) Oil Blue 603 (Hodogaya Kayaku Kogyo K. K.) 0.03g, (4) 2-methoxyethanol 20g, and (5)

MeOH 5 g to give a photosensitive composition which was coated on an Al substrate to give a photosensitive lithog. printing plate. The photosensitive plate was exposed to a 30-A C arc lamp for 30 sec at 70 cm, and developed 1 min in a developer consisting of benzyl alc. 20, aqueous 40% Na silicate solution 10, Monogen Y-100 30, and H2O 940g to give a printing plate.

IT 25249-16-5

RL: USES (Uses)

(photosensitive composition containing, for  
lithog. plates)

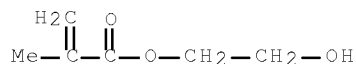
RN 25249-16-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, homopolymer (CA  
INDEX NAME)

CM 1

CRN 868-77-9

CMF C6 H10 O3



INCL 116A415; 103B1; 25(1)A29

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
Processes)

ST photosensitive compo lithog printing; diazo photosensitive  
compon

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(acrylates, photosensitive compns. containing hydroxyethyl  
methacrylate polymer and, for lithog. plates)

IT Lithographic plates

(photosensitive compns. for, containing hydroxyethyl  
methacrylate and urethane acrylate polymers)

IT 25249-16-5

RL: USES (Uses)

(photosensitive composition containing, for  
lithog. plates)

L46 ANSWER 57 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:112760 HCAPLUS Full-text

DOCUMENT NUMBER: 82:112760

ORIGINAL REFERENCE NO.: 82:18027a,18030a

TITLE: Photocrosslinkable resin compositions

INVENTOR(S): Nishikubo, Tadatomi; Imaura, Masakazu;  
Hiramatsu, Fumio

PATENT ASSIGNEE(S): Nippon Oil Seal Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 49107047	A	19741011	JP 1973-17263	

197302  
10

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JP 52026259  
PRIORITY APPLN. INFO.:

B 19770713

JP 1973-17263

A

197302  
10

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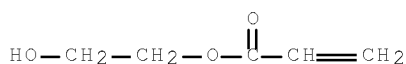
AB Alkyl acrylate copolymers with pendant functional group-containing comonomers were treated with photopolymerizable monomers reactive to the copolymer functional group, and the product was mixed with photopolymerizable monomer and photoinitiator to give photocrosslinkable resin compns. For example, 250 g 40% 1.8:98.2 acrylic acid-ethyl acrylate polymer (I) [25085-35-2] solution (in toluene) was treated with glycidyl acrylate (II) [106-90-1] 3.1, triethylbenzylammonium chloride 0.3, and p-HOC6H4OMe 0.05 g at 100-5° for 3 hr, and the product solution (88 parts) was mixed with 10 parts trimethylolpropane triacrylate [15625-89-5] and 2 parts benzoin Et ether, cast on glass to 0.3 mm thickness, and uv-irradiated to give acetone-insol. film. Et acrylate-2-hydroxyethyl acrylate polymer [28136-76-7] and Et acrylate-glycidyl acrylate polymer [28430-94-6] were also used in place of I and 2,4-tolylene diisocyanate-2-hydroxyethyl acrylate adduct (1:1) [54554-39-1] and acrylic acid [79-10-7] in place of II, and other crosslinkers were, e.g., ethylene glycol diacrylate [2274-11-5] and ethylene glycol dimethacrylate [97-90-5].

IT 28136-76-7  
RL: USES (Uses)  
(crosslinking agents for, photosensitive)

RN 28136-76-7 HCAPLUS

CN 2-Propenoic acid, ethyl ester, polymer with 2-hydroxyethyl  
2-propenoate (CA INDEX NAME)

CM 1

CRN 818-61-1  
CMF C5 H8 O3

CM 2

CRN 140-88-5  
CMF C5 H8 O2

INCL 25(1)C142.12; 24(5)B515

CC 36-6 (Plastics Manufacture and Processing)

ST photosensitive resin compn acrylic

IT 28136-76-7 28430-94-6

RL: USES (Uses)  
(crosslinking agents for, photosensitive)

L46 ANSWER 58 OF 58 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1968:482318 HCAPLUS Full-text

DOCUMENT NUMBER: 69:82318

ORIGINAL REFERENCE NO.: 69:15399a,15402a

TITLE: Light-sensitive composition consisting  
of organic color-generator, photooxidant and  
organic thermally activatable reducing agent  
progenitor

INVENTOR(S): Manos, Philip

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co.

SOURCE: U.S., 10 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3390995	A	19680702	US 1964-363625	196404 29

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PRIORITY APPLN. INFO.:

US 1964-363625

196404  
29

&lt;--

AB A photosensitive composition contains in intimate association, essentially nonhygroscopic interreactant progenitors of intensely colored organic color bodies. The progenitors are activated by radiation of wavelength 2000-4200 A. which can be applied in a graphic pattern. They are permanently deactivated when heated to 80-160°. The composition consists of (1) an essentially colorless, oxidizable N-containing, organic color-generator which, when contained in the photosensitive composition, is stable to oxidation by atmospheric O under normal room and storage conditions but which can be oxidized to an intensely colored species; (2) a photo-oxidant which, when mixed with the oxidizable color generator and irradiated with 2000-4200 A. radiation, will oxidize the color generator to an intensely colored species as an essential part of the composition; (3) an organic progenitor of a reducing agent which, when mixed with components 1 and 2 but prior to the heat treatment it does not function as a reducing agent. It is chemical changed by the heat treatment to produce a reducing agent which prevents the photo-oxidation. A preferred composition contains an aminotriarylmethane with an orthosubstituent in at least 2 of the aryl groups as the organic color generator, a hexaarylbiimidazole as photooxidant, and an acetal of hydroquinone as the organic progenitor of reducing agent. Thus, photosensitive paper is prepared by dipping unsized paper in a 4:1 (by volume) methanol-N,N-dimethylformamide solution containing (by weight) 0.4% tris(4-diethylamino-o-tolyl)methane-3HCl and 0.4% 2,2'-bis(o-chlorophenyl)-4,4',5,5'-tetraphenylbiimidazole followed by drying under an ir lamp. The paper is then dipped into a 0.5% benzene solution of a progenitor of a reducing agent and again dried. The paper is folded so that part of it is exposed for 10 sec. to a 275-w. sun lamp at a distance of 10 in. whereupon an intense blue color forms. The whole paper is then heated for 5 sec. between the plates of a hydraulic press at 125° and the unirradiated portion of the paper exposed to the sun lamp for 10 sec. In the absence of an agent other than the colorgenerator and the photooxidant no deactivation occurs with heating. When a reducing agent deactivates the photosensitive composition prior to heating,

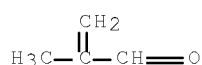


no image is formed on light exposure. With acetals of hydroquinone, substituted hydroquinones, and other phenolic compds., however, the photosensitive composition gives sharp images on uv exposure and is readily deactivated by moderate heating to preserve the initial image during subsequent light exposure.

IT 25120-30-3  
 RL: USES (Uses)  
 (light-sensitive composition containing,  
 stabilized by heat, for photoduplication)  
 RN 25120-30-3 HCAPLUS  
 CN 2-Propenal, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 78-85-3  
 CMF C4 H6 O



INCL 096048000  
 CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 ST light sensitive compn; imidazoles printing; color  
 printing; arylmethanes printing; leuco dye; dye leuco  
 IT Photothermography  
 (light-sensitive composition containing color generator and  
 photooxidant and reducing agent for)  
 IT Photoduplication  
 (light-sensitive composition for, stabilized by heat)  
 IT Phenol, p-methoxy-, orthoformate (3:1)  
 RL: USES (Uses)  
 (light-sensitive composition containing, for photoduplication)  
 IT 67-72-1 68-12-2D, Formamide, N,N-dimethyl-, tin complex 82-90-6  
 92-66-0 120-78-5 121-69-7 507-25-5 558-13-4 630-25-1  
 632-52-0 811-32-5 1249-97-4 1614-15-9 1706-74-7 1707-68-2  
 1750-13-6 2139-44-8 3069-07-6 4482-56-8 5968-67-2  
 6271-40-5 13545-99-8 16902-02-6 17720-63-7 19447-48-4  
 19447-54-2 19447-56-4 20443-88-3 21545-19-7 21545-20-0  
 21545-21-1 21545-22-2 21545-23-3 21545-24-4 21545-26-6  
 21545-27-7 21545-28-8 21545-29-9 21545-31-3 21545-32-4  
 21545-34-6 21545-35-7 21545-37-9 21545-45-9 21545-46-0  
 21645-25-0 22468-38-8 25120-30-3 29382-42-1  
 RL: USES (Uses)  
 (light-sensitive composition containing,  
 stabilized by heat, for photoduplication)

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